Continental
The Future in Motion

ContiPressureCheck™

The system for permanent tire pressure monitoring

GB
USA

User manual
Hand-held tool

Contents

1 General 7
- 1.1 Information on this user manual 7
- 1.2 Liability disclaimer 7
- 1.3 Copyright 7
- 1.4 Abbreviations 8
- 1.5 Explanation of symbols 8
- 1.6 Warnings 9
- 1.7 Manufacturer's address 9
- 1.8 Warranty terms 10
- 1.9 After-sales service 10
  - 1.9.1 Eliminating errors 10
  - 1.9.2 Repairs 10
  - 1.9.3 Updates 10

2 Safety 11
- 2.1 General safety instructions 11
- 2.2 Electric shock hazard 12
- 2.3 Spare parts and accessories 12
- 2.4 Intended use 13

3 Technical data 14

4 Description 15
- 4.1 Description of function 15
- 4.2 Tool overview 16
  - 4.2.1 Operating elements 16
  - 4.2.2 Underside 17
  - 4.2.3 Connections 18
  - 4.2.4 Slot for SD memory card 18
- 4.3 Menu structure 19

4.4 Menu control 21
4.4.1 Calling a menu function 21
4.4.2 Changing a selection 21
4.4.3 Scroll symbol 21
4.5 Type plate 22

5 Commissioning 23
5.1 Checking contents and packaging 23
5.2 Charging the hand-held tool 24
5.2.1 Charging state display 24
5.3 Changing the memory card 25
5.4 Switch the hand-held tool ON/OFF 27
5.5 Setting up the hand-held tool 28

6 Operation 30
6.1 General instruction 30
6.2 Handling the hand-held tool 30
6.2.1 Reading an accessible sensor 31
6.2.1.1 Problem when reading - communication failed 31
6.2.1.2 Problem when reading - other sensor in range 32
6.2.2 Fetching a sensor fitted in the tire 32
6.2.2.1 Problem when fetching - 2 different sensors 33
6.3 Screen displays 34
6.4 Tire Sensor menu 37
6.4.1 Check sensor 38
6.4.2 Activate Sensor 40
6.4.3 Deactivate Sensor 41
6.4.4 Actions on tire 42
6.4.4.1 Select axle configuration 42
6.4.4.2 Fetching tire sensors 43
6.4.4.3 Communicating with the sensors 44

6.4.5 Check all tires 46
6.4.5.1 Enter vehicle name 47
6.4.5.2 Select vehicle configuration 48
6.4.5.3 Read/fetch tire sensors 49
6.4.5.4 Display the tire sensor data 51
6.4.6 Sniffing Tool 52
6.4.7 Trigger Tool 53
6.5 Initialization of the installed CPC system 54
6.5.1 Enter vehicle name 55
6.5.2 Select vehicle configuration 56
6.5.2.1 Special case "MARRIED" 58
6.5.3 Define axle-specific characteristics 59
6.5.3.1 Nominal pressure 59
6.5.3.2 Nominal pressure at ATL 60
6.5.3.3 Lift axle 61
6.5.4 Fetching tire sensors 62
6.5.5 Transfer of the configuration to the CPC system 64
6.5.6 Log file 66
6.5.7 Possible problems 67
6.5.7.1 Sensor not found after 2 attempts 67
6.5.7.2 2 Different sensors found simultaneously 69
6.5.7.3 Sensors not activated 70
6.5.7.4 Further termination criteria during the fetching process 71
6.5.7.5 Configuration transfer not possible 71
6.5.7.6 Transferred configuration not accepted 72
6.6 Resume initialization 73
6.6.7.1 Identification name belongs to vehicle 73
6.6.7.2 Identification name does not belong to vehicle 73

6.7 Test drive 74
6.7.1 Test drive for truck/bus or MARRIED 76
6.7.2 Trailer test drive 81
6.7.3 Possible error codes during test drives 84
6.7.3.1 Warnings 84
6.7.3.2 No CAN data 85
6.7.3.3 Time-out 86
6.7.3.4 Failed 87
6.7.3.5 Pressure check indicator 89
6.8 Modify Installation 90
6.8.1 Modify existing installation 90
6.8.1.1 Checking the installation 92
6.8.1.2 Modify Parameters 93
6.8.1.3 Modify Sensor IDs 95
6.9 Deactivate/activate ContiPressureCheck system 96
6.9.1 Deactivate CPC 96
6.9.2 Activate CPC 97
6.10 Diagnosis 98
6.10.1 DTCs (error codes) 98
6.10.1.1 Read global error codes (DTCs) 101
6.10.1.2 Read tire-releated error codes (DTCs) 107
6.10.1.3 Erase all error codes (DTCs) 111
6.10.1.4 Save error codes (DTCs) 112
6.10.2 Software updates 113
6.10.2.1 Available software on the hand-held tool 114
6.10.2.2 Truck/bus: 115
6.10.2.3 Trailer 117
6.10.2.4 Errors during a software update 119

7 SD memory card 120
7.1 General instructions on the SD memory card 120
7.2 Handling data on the SD memory card 121
7.3 Directory structure 122
7.4 Log files 122

8 Maintenance 124
8.1 Software update for the hand-held tool 124
8.2 Connection to the PC 125
8.3 Replacing the fuse in the diagnosis cable 127
8.4 Cleaning 128
8.5 Storage 128

9 Troubleshooting 128
9.1 Resetting 128

10 Disposal 129
10.1 Electrical/electronic components 129

11 EC Declaration of Conformity 129

12 Homologation 130
12.1 Overview 130
12.2 Canada 130

13 Index 131

1 General

1.1 Information on this user manual

This user manual is part of the TPM-02 hand-held tool and provides important instructions on the intended use, safety, startup and operation of the hand-held tool.

The user manual must be read and utilized by every person who operates this hand-held tool and troubleshoots the hand-held tool.

Store the user manual and give it the any new owner together with the hand-held tool.

1.2 Liability disclaimer

The manufacturer assumes no liability for damage and operational faults resulting from:

- failure to observe this user manual,
- use for other than the intended purpose,
- improper repairs,
- unauthorized modifications or
- use of non-approved spare parts

1.3 Copyright

This user manual is copyrighted.

The user manual may not be duplicated in whole or in part for other purposes without the express permission of Continental Reifen Deutschland GmbH.

1.4 Abbreviations

The following abbreviations are used in this user manual:

Abbreviation	Meaning
CCU	**C**entral **C**ontrol **U**nit
CPC	**C**onti**P**ressure**C**heck™
CSW	**C**AN s**w**itch - switching module (integrated into the CCU trailer)
DSP	**Disp**lay
DTC	**D**iagnostic **T**rouble **C**ode
HHT	**H**and-**H**eld-**T**ool

1.5 Explanation of symbols

Warnings in this user manual are also indicated by warning symbols.
The following warning symbols are used in this user manual:

Symbol	Meaning
	General warning
	Warning of electric current
	General instructions and useful suggestions on handling
	Note on observing environmental regulations for disposal
	Electric/electronic components with this symbol may not be disposed of in the normal household waste.

1.6 Warnings

In the current user manual, the following warnings are used:

⚠ WARNING

A warning of this hazard level indicates a hazardous situation.

If the hazardous situation is not avoided, it can result in serious injuries.

► Follow the instructions in this warning to avoid serious injuries to persons.

ATTENTION

A warning of this hazard level indicates potential damage to equipment.

If the situation is not avoided, it can result in equipment damage.

► Follow the instructions in this warning to avoid the equipment damage.

NOTE

► A note draws attention to additional information of importance for the further work or which simplifies the work step described.

1.7 Manufacturer's address

Continental Reifen Deutschland GmbH

Büttnerstraße 25

30165 Hannover

Germany

www.contipressurecheck.com

1.8 Warranty terms

The statutory warranty terms apply, with the exception of possible contractual agreements.

The current version can be obtained from:
www.contipressurecheck.com

1.9 After-sales service

1.9.1 Eliminating errors

	NOTE
	▶ If the handling instructions in this user manual do not lead to the elimination of the fault, contact the after-sales service of the respective country.

All necessary information can be obtained from:
www.contipressurecheck.com

1.9.2 Repairs

In the event of repair of the hand-held tool, a used replacement tool will be made available. This generally takes place within 24 hours of receiving the defective tool but no later than 72 hours.

Calculation of the costs of replacement takes place according to the relevant regulations of the warranty (see section ***„1.8 Warranty terms“ on page 10***).

1.9.3 Updates

The current version of this user manual and further information can be obtained from
www.contipressurecheck.com

2 Safety

2.1 General safety instructions

Observe the following general safety instructions to ensure safe handling of the hand-held tool:

- Check all parts of the hand-held tool for visible damage before use. Do not use a damaged hand-held tool.
- Do not allow the hand-held tool to fall down or subject it to hard knocks.
- With the exception of the slot for the SD memory card, do not open the hand-held tool. There are no maintenance-relevant parts inside the hand-held tool.
- The rechargeable battery of the hand-held tool can not be replaced.
- Only allow the manufacturer to repair the hand-held tool. Improper repairs or opening the tool will invalidate the guarantee.
- Protect the hand-held tool against humidity or penetration of liquids or objects. If the tool comes into contact with liquids, disconnect it from the power supply immediately.

2.2 Electric shock hazard

⚠ WARNING

Danger to life from electric current!

Contact with live wires or components can lead to serious injury or even death!

- ▶ Only use the power adapter supplied otherwise the hand-held tool could be damaged.
- ▶ Doe not use the hand-held tool if the connecting cable or the housing or the power adapter is damaged.
- ▶ Never open the housing of the power adapter. Danger from electric shock if live connections are touched and/or the electrical and mechanical configuration is changed.
- ▶ Never immerse the hand-held tool or the mains plug into water or other liquids.

2.3 Spare parts and accessories

ATTENTION

Damage and malfunctions due to incorrect spare parts and accessories.

The hand-held tool or vehicle components can be damaged or malfunction if wrong or non-original spare parts are used.

- ▶ Use original parts only.
- ▶ Only use the original diagnosis cable for transferring data between the hand-held tool and the CPC system otherwise data transfer errors can occur.

2.4 Intended use

The hand-held tool is intended to be used only

- for communicating with and setting the tire sensors,
- for reading the pressure and temperature values,
- for setting up/adjusting the CPC system on the vehicle,
- for checking the system performance,
- for error diagnostics,
- for transferring data between the PC and the hand-held tool and
- updating the software.

Use for any other purpose is not considered as intended use.

⚠ WARNING

Hazard from use for other than the intended purpose!

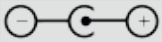
If used for other than its intended purpose, the hand-held tool can be a source of danger and cause damage to equipment.

► Use the hand-held tool only for its intended purpose.

No claims of any kind will be accepted for damage resulting from use for other than the intended purpose.

In such cases, the risk must be borne solely by the user.

3 Technical data

Hand-held tool		
Dimensions (L x W x H)	6.29 x 3.54 x 1.49	in.
Weight	1.65	lbs
Display	3-inch 128 x 64 pixel monochrome graphic LCD with backlighting	
Degree of protection	IP 54	
Power pack	Lithium-ion rechargeable battery 850 mAh / 11.1 V	
Operating temperature	-10 to 50 14 to 122	°C °F
Storage temperature	-40 to 85 -40 to 185	°C °F
Connections		
USB 2.0 (PC)	Type A	
of diagnostic cable	Hirose, 24-pole	
Power adapter connection	Barrel connector, 0.05/0.14 in. 	
Memory card		
Card type	SD card	
max. capacity	32 GB (scope of supply 1 GB)	
High-frequency part		
HF frequency range	433.92 MHz	
LF frequency range	125 kHz	
Number of plugging cycles, min.		
USB plug	1,000	cycles
Diagnosis plug	100	
Power adapter plug	10,000	
Power adapter		
Type	Sinpro SPU 15-106	
Input	90 ... 264 VAC / 47 ... 63 Hz	
Output	13 V - 16 V / max. 0.94 A - 1.15 A	

4 Description

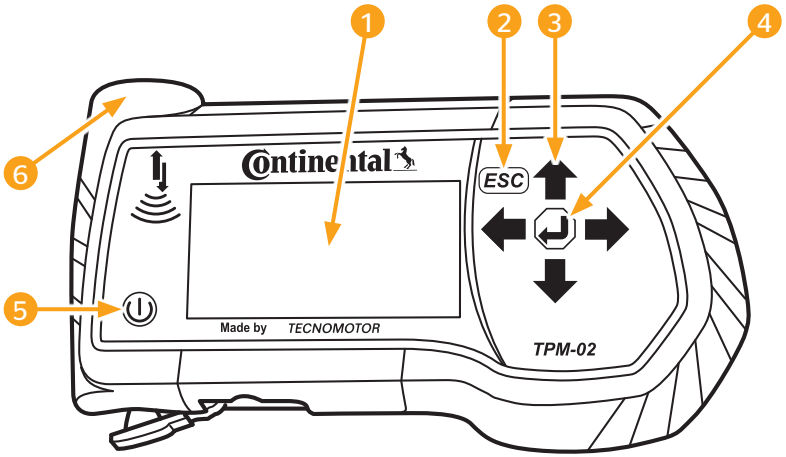
4.1 Description of function

The TPM-02 hand-held tool is a configuration and diagnostics device with the following functions:

- Tire sensor check,
- Tire pressure and temperature measuring,
- Tire sensor activation/deactivation,
- New Installation on the vehicle/trailer,
- Checking and changing the existing configuration,
- Checking the system performance (test drive),
- Reading of error codes (DTCs),
- Updating firmware for the display (DSP), CCU and switching module (CSW),
- Logging vehicle and configuration data,
- Communication between the PC and the hand-held tool.

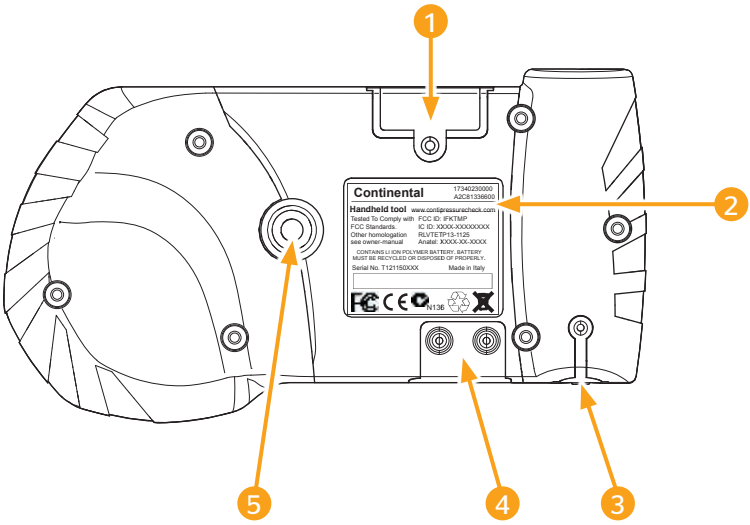
4.2 Tool overview

4.2.1 Operating elements



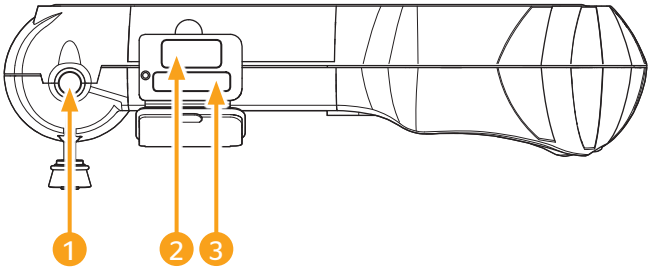
Pos	Designation	Task
1	Screen	Menu display.
2	ESC key (ESC)	Exit a sub-menu. Scroll back in some menus.
		Press the ESC key for 3 s. = cancel an action.
3	Arrow keys	Navigate within a menu. Setup values
4	Return key	Confirm selection. Acknowledge a message.
5	ON/OFF key	Switch the hand-held tool ON/OFF.
6	Antenna	Antenna for quering the tire sensors.

4.2.2 Underside



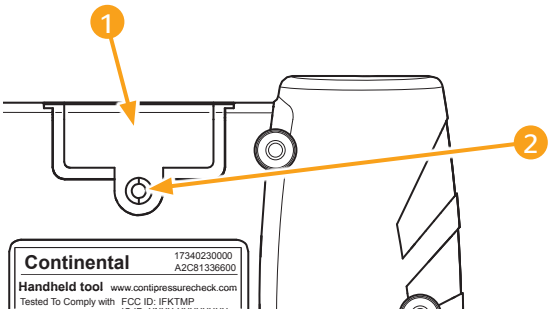
Pos	Designation
1	Slot for SD memory card
2	Type plate
3	Cover for power adapter connection sockets
4	Cover for USB and diagnosis cable connection sockets
5	Fixing for carrying strap* *not included in the scope of supply

4.2.3 Connections



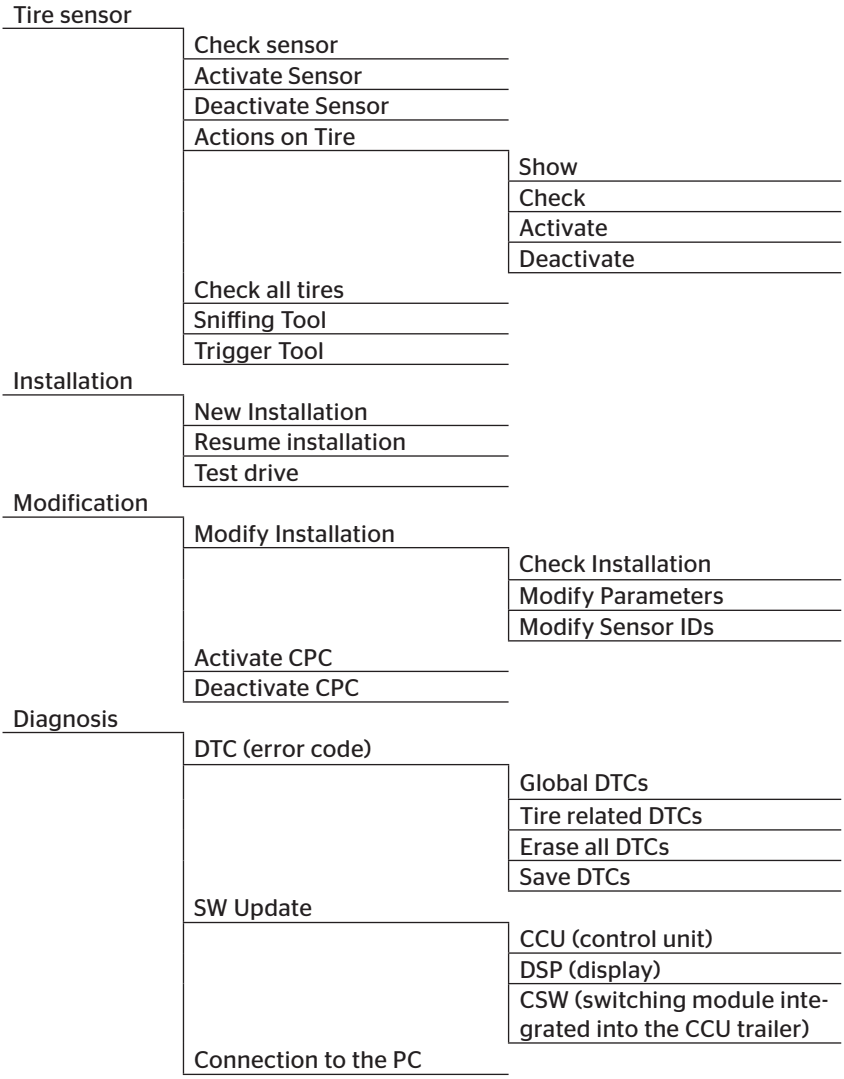
Pos	Designation
1	Connection for power adapter
2	Connection for USB cable
3	Connection for diagnosis cable

4.2.4 Slot for SD memory card



Pos	Designation
1	Cover for SD memory card slot
2	Fixing screw for cover

4.3 Menu structure



- Setup
  - Language
    - Česky / Czech
    - Dansk / Danish
    - Deutsch / German
    - English / English
    - Español / Spanish
    - Français / French
    - Italiano / Italian
    - Magyar / Hungarian
    - Nederlands / Dutch
    - Norske / Norwegian
    - Polski / Polish
    - Português / Portuguese
    - Româna / Rumanian
    - Slovenský / Slovak
    - Soumi / Finnish
    - Svenskt / Swedish
    - Türkçe / Turkish
  - Measurement unit
    - Pressure
    - Temperature
  - Sound setup
    - Sound
    - Vibration
  - Tool Properties
    - Automatic power-off
    - Date/time
    - Use date
  - Release

4.4 Menu control

Operating the hand-held tool takes place menu-driven via the keys of the tool. The following lists the possible operating steps:

4.4.1 Calling a menu function

- Use the arrow keys ↕ to select the desired menu item.
- Confirm selection with the Return key ↵ and call up the menu item.
- If the menu includes submenus, use the arrow keys ↕ to select the desired menu item and confirm selection with the Return key ↵.
- Press the ESC key (ESC) to return to the previous menu level.
- Press the ESC key (ESC) for 3 s to cancel an action.

4.4.2 Changing a selection

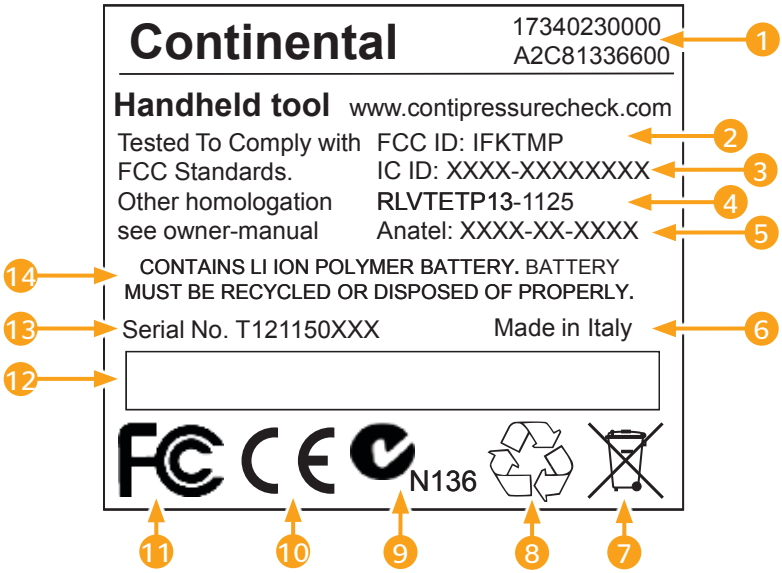
- Use the arrow keys ← → to select between the settings/options.
- Confirm selection with the Return key ↵.

4.4.3 Scroll symbol

If the space on the screen is not sufficient to display all entries, a scroll symbol ⇩ or ⇧ appears on the right-hand side. All entries can be called with the arrow keys ↕.

4.5 Type plate

The type plate is located on the underside of the tool.



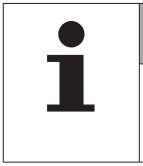
Pos	Meaning
1	Article number
2	Homologation marking according to FCC
3	Homologation marking, Canada
4	Homologation marking, Mexico
5	Homologation marking, Brazil
6	Country of origin
7	Do not dispose of in the household garbage
8	Contains materials that can be recycled
9	Note on the Homologation marking, Australia
10	Note on CE conformity in the European Union
11	Note on compliance with FCC standards
12	Barcode
13	Serial number
14	The hand-held tool must be disposed of separately.

5 Commissioning

5.1 Checking contents and packaging

As standard, the hand-held tool is supplied with the following components:

- Hand-held tool (incl. 1 GB SD memory card)
- Diagnosis cable
- USB cable
- Power adapter
- 4 power plugs EU (European Union), UL (USA), UK (England), AU (Australia)
- CD-ROM
- Brief instructions
- Homologation certificate
- 2 replacement fuses for the diagnosis cable
- Transport case



NOTE

▶ Check for visible signs of damage or missing items on delivery. Report an incomplete or damaged delivery to your supplier/retailer immediately.

5.2 Charging the hand-held tool

- Switch on the hand-held tool.
- Remove the cover for the connection socket of the power adapter.
- Connect the connecting cable of the power adapter and plug the power adapter into a mains socket.
- After approx. 10 seconds, the tool switches itself off automatically and a charging symbol is displayed on the screen.

NOTE

▶ If an adapter or charging symbol is not displayed during charging, the tool is not being charged sufficiently.

NOTE

▶ Only use the power adapter supplied.
▶ The charging process takes approx. 7 hours.
▶ For accreditation reasons, the hand-held tool may not be operated when the mains adapter is connected.

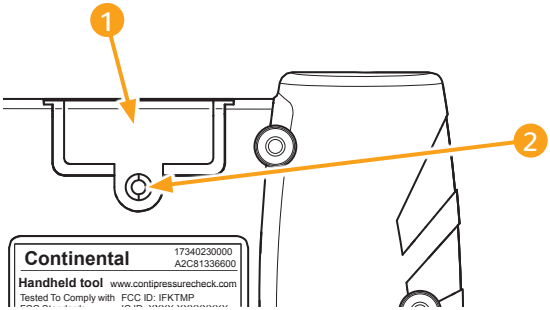
5.2.1 Charging state display

- If the hand-held tool is running on battery power, the charging state is displayed by a battery symbol in the top right corner of the screen. The level indicated on the battery symbol corresponds to the charging state of the rechargeable batteries .
- If the hand-held tool is connected via the power adapter, a plug symbol appears in the upper right corner of the screen .

5.3 Changing the memory card

The files required for updating the firmware of the display, CCU and the switching module (CSW) are stored on the SD memory card built into the hand-held tool.
The data for the system languages is also stored on the SD memory card serves as storage location for the log files created by the hand-held tool.

	NOTE
	▶ An SD memory card is supplied with the hand-held tool by default. ▶ For communicating with the SD memory card, the hand-held tool is connected to the PC/Laptop via a USB cable, see section ***„8.2 Connection to the PC“ on page 125***. The SD memory card remains in the hand-held tool. ▶ Do not erase or modify the data on the memory card as this leads to malfunctions or even total failure of the hand-held tool. ▶ The log files are an exception! These can be erased without influencing the system.



To replace the SD memory card if it is defective, proceed as follows:

- Loosen the fixing screw 2 of the cover 1 and remove it.
- Push the card lightly to release the locking mechanism of the memory card.
- Change the memory card. Pay attention to proper location of the contacts when inserting.
- Push in the memory card until it snaps in.
- Replace the cover 1 and tighten the fixing screw 2.

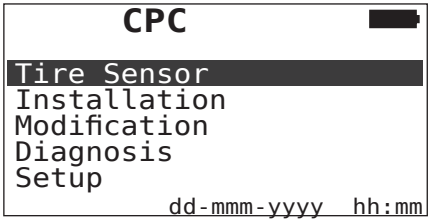
	NOTE
	▶ Information on setting up the new SD memory card is available on the website ***www.contipressurecheck.com***.

5.4 Switch the hand-held tool ON/OFF

The hand-held tool is switched on or off by pressing the ON/OFF key ⏻.

The start screen is displayed for 3 seconds after switching on.

The following main menu then appears:



Pressing the ⏻ key again for approx. 3 seconds switches the hand-held tool off.

NOTE

- The date and time display can be activated in the main menu under **Setup - Tool Properties - Use Date**.

5.5 Setting up the hand-held tool

Fundamental tool settings such as language, units etc. are determined in the "**Setup" menu**.

Menu item	Meaning	Selection	
Language	Operating language of the screen	Danish. German, English, Finnish, French, Italian, Dutch, Norwegian, Polish, Portuguese, Rumanian, Swedish, Slovak, Spanish, Czech, Turkish, Hungarian	
Meas. unit	Unit for pressure and temperature	Pressure	bar/psi
		Temperature	°C/°F
Sound setup	Signal output as sound and/or vibration	Sound	On/off
		Vibration	On/off
Tool Properties	Time, after which the hand-held tool is switched off automatically.	Automatic switch-off	Off 5min 10min 15min
	System date and time	Data and time setting. Date format can be selected.	
	Use date	Use date and time (yes / no). – Display in the main menu – Use with log files	
Release	Information on the firmware	Display of the FW version and the serial number	

- Select the desired menu item with the arrow keys ↕ and confirm with the Return key ↵.
- Navigate between the menu items with the arrow keys ↕ and change the values / settings with the arrow keys ← →.
- Confirm selection with the Return key ↵. The selection is stored and you are returned to the next highest level of the menu.
- The submenu is exited by pressing the ESC key (ESC) and to the "**Setup**" menu without making any changes.

	NOTE
	▶ The menu begins with the main setting in English. Select the desired language by following the menu path: "**SETUP/LANGUAGE**". ▶ If no SD memory card is inserted in the hand-held tool or it is defective, only "**ENGLISH**" is available.

6 Operation

6.1 General instruction

For trouble-free operation, pay attention to the following instructions:

- Always operate the hand-held tool with fully-charged batteries so that full transmission power is ensured.
- Keep the cover of the hand-held tool closed so that not dirt particles or fluids can penetrate the hand-held tool.

6.2 Handling the hand-held tool

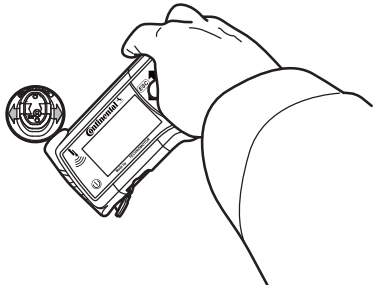
In order to communicate with the tire sensors, the hand-held tool is equipped with an antenna. The following describes the procedure for communication that is used in all menus.

	NOTE
	▶ Always hold the antenna in the direction of the sensor in order to ensure the best possible communication. ▶ If sound and/or vibration was switched during setup, a corresponding signal is emitted after successful reading. ▶ The read operation takes place via 3 steps with increasing transmission power. If communication beyond that is still not possible, the process is aborted.

6.2.1 Reading an accessible sensor

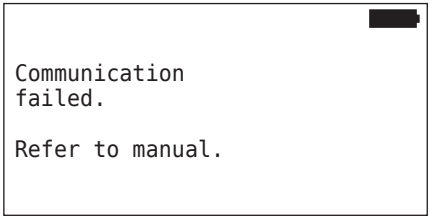
In the event that the sensor is easily accessible, proceed as follows for reading:

- Hold the hand-held tool with antenna directly in front of the sensor as illustrated.



6.2.1.1 Problem when reading - communication failed

If communication with the sensor is not possible, the following message appears::



Remedy:

1. Check the charging state of the hand-held tool and charge if necessary.
2. Repeat the procedure with another tire sensor.
   - ▶ If communication is possible, the 1st tire sensor is defective.
   - ▶ If communication is still not possible, contact after-sales service.

6.2.1.2 Problem when reading - other sensor in range

If a further sensor is within radio range, the sensor to be checked cannot be safely read.

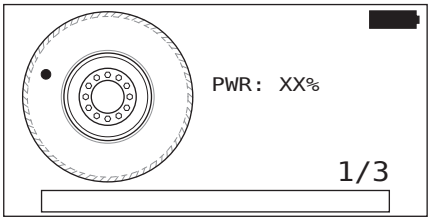
The following appears:

Remedy:

- Put the sensor out of range of the other sensors or sources of interference.

6.2.2 Fetching a sensor fitted in the tire

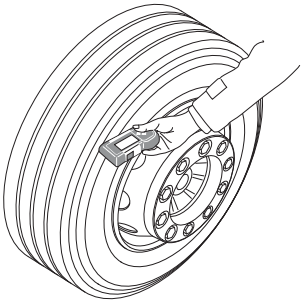
When fetching the tire sensors, the following is displayed:



In the animation, the marker point moves along the side wall in a specified direction and at a specified speed.

	NOTE
	▶ The percentage indicates the current pending transmission power (PWR) of the query signal.

- Hold the hand-held tool with antenna in front of the side wall of the tire as illustrated. The marker point is the starting point.



- Move the hand-held tool along the side wall of the tire at the same speed of the animation.

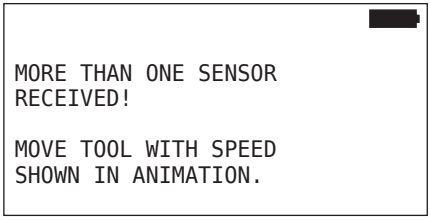
The hand-held tool transmits the query signals at 3 transmission power levels. The levels are represented on the screen.

- Move the hand-held tool along the side wall around the whole circumference of the tire once for each power level.

	NOTE
	▶ The mark must be aligned vertically to the side wall and the antenna below the tread when moving. ▶ Pay attention to the location of the starting point and the direction of rotation in the animation.

6.2.2.1 Problem when fetching - 2 different sensors

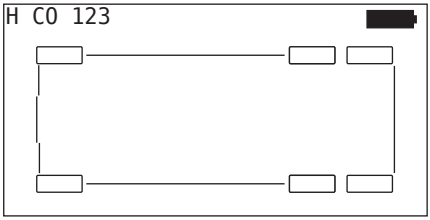
If the hand-held tool reaches 2 different sensors, the following message appears:



- Repeat the fetching procedure for this tire.

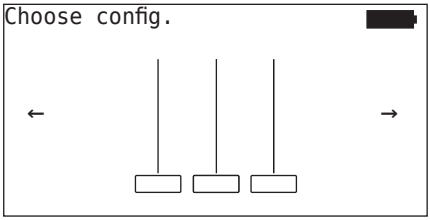
6.3 Screen displays

Vehicle depiction:



Shows the vehicle configuration from the top.

Axle depiction:



Shows the axle/tire configuration at a part of the vehicle.

Tire depiction:

To visualize the tire sensor data, the color and the content of the tire symbol changes.

Illustration	Meaning
	Existing tires.
	Fetched sensor with data: 1. Tire pressure. or 2. number of telegrams or RSSI (see ***„6.7 Test drive“ on page 74***).
	Faulty sensor. Show details on faults: ■ Select tire with the corresponding arrow keys. (tire marked with "[ ]"). ■ Confirm selection with the Return key ↵. (for possible faults, see chart in section ***„6.4.1 Check sensor“ on page 38)***
	Fetched, deactivated sensor (shipping mode)
	Sensor not found.
	Tire are shown in this way when the focus is on the axle

A tire symbol marked with "[ ]" is focused in the menu.

To visualize additional information in the case of error codes (DTC), the tire symbol could be displayed inverted or flashing.

Illustration	Meaning
	The following applies when indicating errors: Symbol is flashing: active DTCs pending. Symbol not flashing: passive DTCs pending. (see ***„6.10.1.2 Read tire-releated error codes (DTCs)“ on page 107***)

6.4 Tire Sensor menu

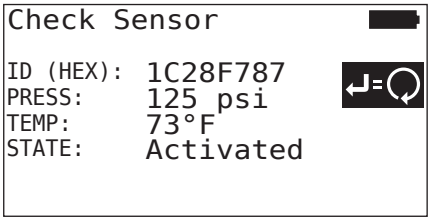
Sensors can be checked, activated and deactivated in "**Tire sensor"** menu. Tire-related sensors can be queried for a specific vehicle under the submenu items "Actions on tire" and "Check all tires". Furthermore, the surroundings of the hand-held tool can be checked for existing sensors and what power transmission level of the query signal is required for them to respond.

6.4.1 Check sensor

Tire sensor - Check sensor

- Read sensor as described in section *„6.2.1 Reading an accessible sensor“ on page 31*.

The following is displayed on the screen:



Field	Meaning	
ID (hex)	Identification number of the sensor.	
PRES-SURE	Tire pressure (in a dismantled state, 0 bar/0 psi).	
TEMP	Ambient temperature of the sensor.	
STATUS	**activated** = park mode	Sensor is at idle. A telegram is transmitted every 2 minutes.
	deactivated = shipping mode	Sensor only transmits telegrams when specifically queried.
	START mode	Beginning at a speed of approx. 30 km/h (18 mph), a telegram is transmitted 40-times every 16 seconds. DRIVE mode follows.
	DRIVE mode	Sensor is moving. A telegram is transmitted every 2 minutes.

The following error messages are possible:

Error	Meaning
Sensor is DEFECTIVE	The tire sensor is no longer operational. Replace with a new sensor.
LOW battery	The capacity of the battery in the tire sensor is no longer sufficient for continued use. Replace with a new tire sensor.
Sensor is LOOSE	It is possible that the tire module has become loose in the tire or was mounted head over heels. If this error occurs in the case of a tire sensor, it is no longer operational and must be replaced by a new sensor.
ACC > 5 g < -5 g	If this error occurs when the tire sensor is not in motion, it is no longer operational and must be replaced by a new sensor.

NOTE

▶ If the is displayed on the screen, the test procedure can be repeated by pressing the Return key .

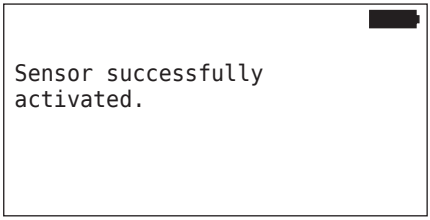
6.4.2 Activate Sensor

By default, the sensor is deactivated and does not transmit any telegrams automatically. In order to be able to operate the sensor at the vehicle, it must be activated.

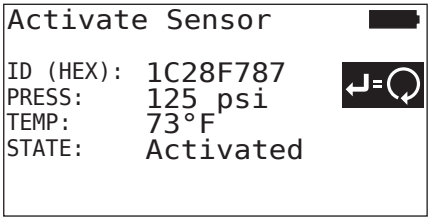
Tire Sensor - Activate Sensor

- Read sensor as described in section ***„6.2.1 Reading an accessible sensor“ on page 31***.

The following is displayed on the screen:



The following messages appears after 3 seconds:



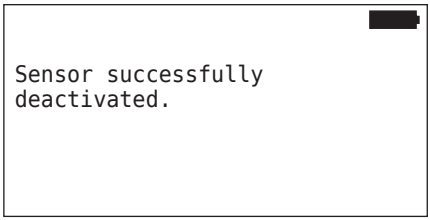
6.4.3 Deactivate Sensor

The sensor must be deactivated for longer periods of storage or for shipping.

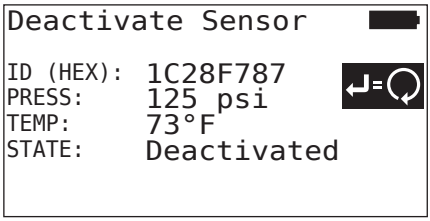
Tire Sensor - Deactivate Sensor

- Read sensor as described in section *„6.2.1 Reading an accessible sensor“ on page 31*.

The following is displayed on the screen:



The following messages appears after 3 seconds:



NOTE

- If the sensor is in a "deactivated" state, it is in "shipping mode" and no longer transmits telegrams automatically.
- The tire sensor must be deactivated for transport in an airplane.

6.4.4 Actions on tire

For tire-related query/operation of sensors installed in a vehicle, the sensors with their associated tires must be fetched first.

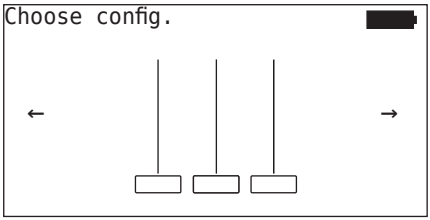
Tire sensor - Actions on tire

Query of the tires takes place in 3 steps:

1. Selection of the axle configuration.
2. Fetching the tire sensors
3. Specific communication with the tire sensors.

6.4.4.1 Select axle configuration

The following is displayed on the screen:

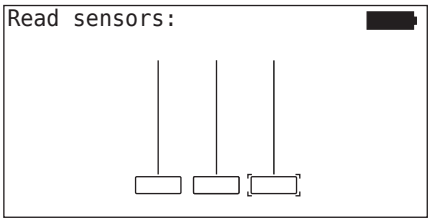


- Move between the axle configurations with the arrow keys ← →.
- Confirm selection with the Return key ↵.

6.4.4.2 Fetching tire sensors

Now each individual sensor can be fetched. The current tire to be fetched is marked on the screen by "[ ]":

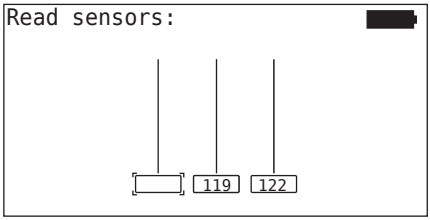
The following is displayed on the screen:



- Read the sensor with the hand-held tool as described in the section ***„6.2.2 Fetching a sensor fitted in the tire“ on page 32***.

When the sensor is found in the marked tire, the tire pressure at the time of fetching tire is displayed in the tire symbol and the next tire to be fetched is displayed.

Fetch all tires as specified on the screen. The following message appears for the last tire to be fetched:



When the fetching procedure including the last tire is completed, the individual sensors can be addressed specifically.

NOTE

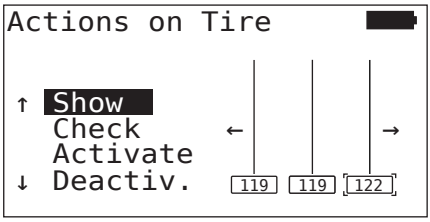
- Remedy possible errors during fetching of the tire sensors as described in the sections ***6.5.7.1***, ***6.5.7.2***, ***6.5.7.3*** and ***6.5.7.4***.
- If a sensor is not acquired, fetching will be aborted. Fetching will continued for the next tire.

6.4.4.3 Communicating with the sensors

For specific communication with the tire sensors.:

- Use the arrow keys ← → to navigate between the tires.
- Use the arrow keys ↑ ↓ to navigate between the 4 menu items.
- Execute the selected action by pressing the Return key ↵.

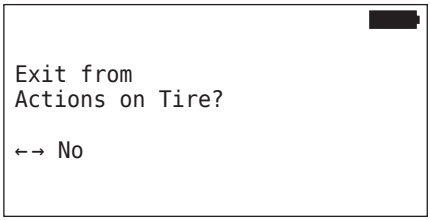
The following is displayed on the screen:



Menu item	Meaning
SHOW	Shows the previously read sensor data for 15 seconds. Data output as in section ***„Check sensor“ on page 38***.
CHECK	Query the tire sensor again and to show the current sensor data for 15 seconds. Data output as in section ***„6.4.1 Check sensor“ on page 38***
ACTIVATE	Activates the selected sensor. Corresponds to the function in section ***„6.4.2 Activate Sensor“ on page 40***.
DEACTIVATE	Deactivates the selected sensor. Corresponds to the function in section ***„6.4.3 Deactivate Sensor“ on page 41***.

- To exit the "Actions on tire" menu, press the ESC key (ESC) for 3 seconds.

The following screen appears.



- Select "Yes" with the arrow keys ← → and confirm with the Return key (↵).

6.4.5 Check all tires

This menu item is used for querying the sensor data in the case of vehicles without their own CCU and display. The entire vehicle configuration must be fetched.

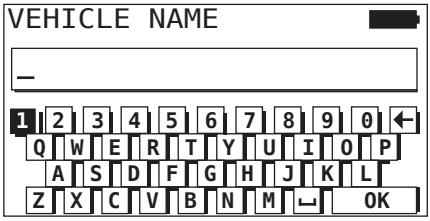
Tire sensor - Check all tires

Querying the tires takes place in 5 steps:

1. Name of the vehicle
2. Selection of the vehicle configuration
3. Read/fetch the tire sensors
4. Create a log file
5. If required: display details of the sensor data

6.4.5.1 Enter vehicle name

The vehicle name serves to identify the vehicle and the associated configuration. The vehicle name is stored in the log file.
See also *„7.4 Log files“ on page 122.*



- Use the arrow keys to select the numbers and letters.
- Confirm selection with the Return key.
- Select "OK" and confirm with the Return key when the vehicle name is complete.

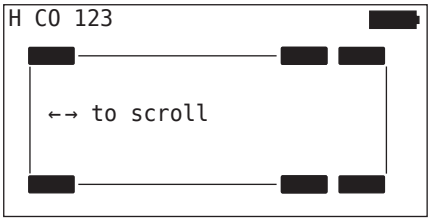
NOTE

- 19 characters - max. length of the vehicle name.
- If an individual name is not entered, "NO VEHICLE NAME" is used as vehicle name.
- As an example for this description, "H CO 123" was used as the vehicle name.

6.4.5.2 Select vehicle configuration

Characteristic	Meaning	Selection
Vehicle type	Type of vehicle	Truck/Bus:
		Trailer
Number of axles	The selection options depend on the vehicle type.	1-6

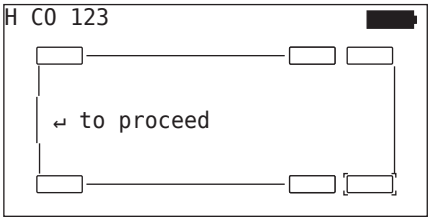
When selection is complete, the birds-eye-view of a possible vehicle appears:



- Use the arrow keys ← → to move between the configurations.
- Confirm selection with the Return key ↵.

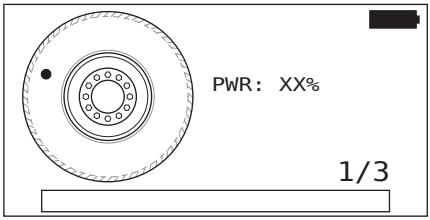
6.4.5.3 Read/fetch tire sensors

Now each individual sensor can be read/fetched. The current tire to be fetched is marked on the screen by "[ ]":



- Take the hand-held tool and go to the marked tire on the vehicle.
- Start the fetching process by pressing the Return key ↵.

An animation of the fetching process appears on the screen:



- Read the sensor with the hand-held tool as described in the section ***„6.2.2 Fetching a sensor fitted in the tire“ on page 32***.

	NOTE
	▶ Pay attention to the starting point and the direction of rotation in the animation.

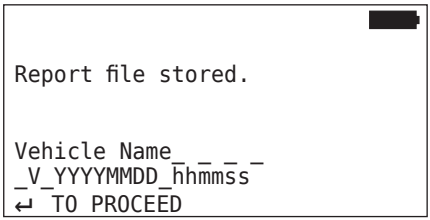
Fetched tires are illustrated as in section ***„6.3 Screen displays“ on page 34***.

NOTE

- Remedy possible errors during fetching of the tire sensors as described in the sections ***6.5.7.1***, ***6.5.7.2***, ***6.5.7.3*** and ***6.5.7.4***.
- If a sensor is not acquired, fetching will be aborted. Fetching will continued for the next tire.

After completion of reading/fetching, a log file is created automatically and stored to the SD memory card. See also section ***„7.4 Log files“ on page 122***.

The following is displayed on the screen:

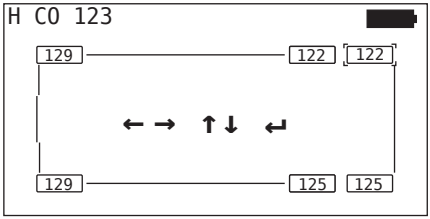


- Exit display of the log file with the Return key ↵.

The overall view of the vehicle appears on the screen.

6.4.5.4 Display the tire sensor data

Now any tire senor can be selected.



- Select the desired tire sensor with the arrow keys ←→↑↓.
- Confirm selection of the tire sensor with the Return key ↵.

The data of the selected tire sensor is displayed. See section ***„6.4.1 Check sensor“ on page 38***.

To return to the overall view of the vehicle:

- Press the Return button ↵ or the ESC key (***ESC***).
- Returning to the overall view takes place automatically after 15 seconds.

To exit the menu item:

- Press the ESC key (***ESC***) for 3 seconds.
- When prompted to exit the menu item, use the arrow keys ← → and press the Return key ↵ and confirm with "Yes".

6.4.6 Sniffing Tool

For identification of all sensors within the transmitting/receiving range of the hand-held tool, data can be collected via the "Signal Collector" menu.

The sensors transmit:

- Identification number of the sensor (hex)
- Pressure (bar or psi)
- Temperature (°C or °F)

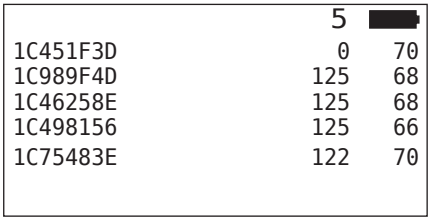
The header of the screen displays further information:

- Number of telegrams received

This menu item can be used to identify sensors that are unintentionally located within the work area.

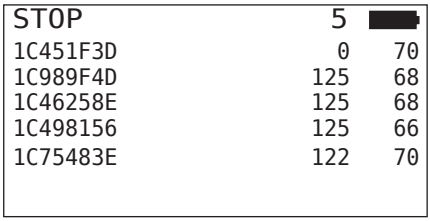
Tire sensor - Sniffing Tool

The following is displayed on the screen:



◆ Signal reception is stopped with the ESC key (ESC).

The following is displayed on the screen:



◆ Confirming a second time with the ESC-Taste (ESC) cancels the "Sniffing Tool" function .

6.4.7 Trigger Tool

A signal with defined transmission power can be emitted to query the sensors surrounding the hand-held tool. The sensors in the radius of action of the signal responds with the following data:

- Identification number of the sensor (hex)
- Status of the sensor (hex)
- Specification of the duration between two response telegrams received (in ms).

The header of the screen displays further information:

- Transmission power of the querying signal as a percentage (%)
- Number of telegrams received

The trigger analysis is able to recognize the proportional transmission power required in order for the sensor to respond.

Tire sensor - Trigger Tool

The following is displayed on the screen:

Power	4%	15
1C451F3D	Dh	40
1C989F4D	9h	1690
1C46258E	Dh	720
1C498156	Dh	80
1C75483E	9h	140
1C468756	Dh	1230
1C125F2E	Dh	20

◆ The proportional transmission power of the querying signal can be increase or decreased with the arrow keys ↕.

NOTE

▶ When starting the function, the proportional transmission power is 0% and must be increased as described.

◆ Querying is stopped and the function canceled with the ESC key (ESC).

6.5 Initialization of the installed CPC system

	NOTE
	▶ Before initializing the system, make sure that all tire sensors are activated.

Initialization of the system takes place in 6 steps:

1. Name of the vehicle
2. Selection of the vehicle configuration
3. Definition of axle-specific characteristics
4. Fetching the tire sensors
5. Transfer of the configuration to the CPC system
6. Create a log file

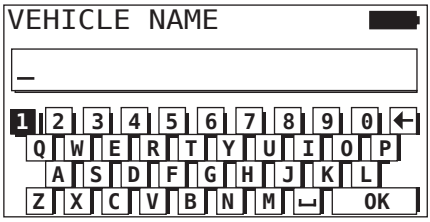
	NOTE
	▶ The installation process can be canceled at any time by pressing the ESC key (ESC) for 3 seconds. ▶ It is possible to resume the installation process from the point where it was aborted via the "Resume installation" menu item. See section ***„6.6 Resume initialization“ on page 73.***

Installation - New Installation

	NOTE
	▶ By selecting the "Installation" item in the main menu, the charging state of the battery is checked. If this is not sufficient, the following message appears: "Low battery! Power on the HHT to charge it.“ Charge the hand-held tool as described in section ***„5.2 Charging the hand-held tool“ on page 24***.

6.5.1 Enter vehicle name

The vehicle name serves to identify the vehicle and the associated configuration. The vehicle name is stored in the CCU and in the log file.
See also *„7.4 Log files“ on page 122.*



- Use the arrow keys to select the numbers and letters.
- Confirm selection with the Return key.
- Select "OK" and confirm with the Return key when the vehicle name is complete.

NOTE

- 19 characters - max. length of the vehicle name.
- If an individual name is not entered, "NO VEHICLE NAME" is used as vehicle name.
- As an example for this description, "H CO 123" was used as the vehicle name.

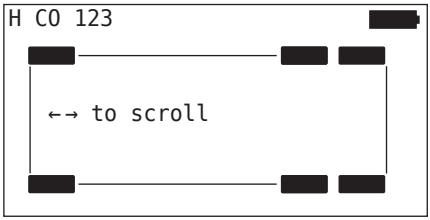
6.5.2 Select vehicle configuration

NOTE
▶ A list of recommended vehicle configurations and types for the CPC equipment can be viewed at www.contipressurecheck.com.

Characteristic	Meaning	Selection	
Vehicle type	Type of vehicle	Truck/Bus:	
		Trailer	
		Married	
ATL (**A**uto**T**railer**L**earning)	Automatic recognition of the newly-connected trailer. (selection only with selected vehicle type "Truck/Bus")	Yes	No
Add. Receiver	Is an additional receiver installed. (Automatic function when "ATL" is activated or vehicle type "Married" selected.)	Yes	No
Number of axles	The selection options depend on the vehicle type.	1-6	

NOTE
The CPC system automatically detects when a single tire with tire sensor is replaced. Also see: ContiPressureCheck -Installation manual- section "***Automatic Wheel Change Detection".*** ▶ When selecting the ATL function, "Automatic Wheel Change Detection" is deactivated!

When selection is complete, the birds-eye-view of a possible vehicle appears:



- Use the arrow keys ← → to move between the vehicle configurations.
- Confirm selection with the Return key ↵.

6.5.2.1 Special case "MARRIED"

Select this vehicle type when the tire sensors of the trailer are to be received and indicated in the display of the CPC system of the truck.

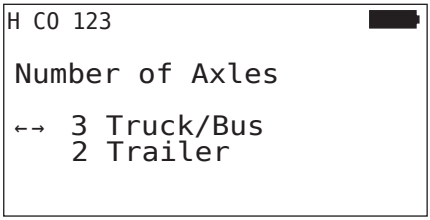
The sensors of the trailer are permanently programmed into the CCU of the truck for this purpose.

An additional receiver is necessary for this vehicle type and is therefore automatically linked into the CPC configuration by the hand-held tool.

The trailer must be permanently married to the truck otherwise "NO RECEPTION" is displayed in the display for the trailer sensors (see user manual for display)

For the "Married" vehicle type, the number of axles for the respective truck and trailer is selected separately.

Altogether, it is not possible to select more than 6 axles.



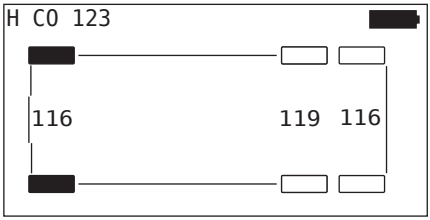
- Modify the selection with the arrow keys.
- Confirm selection with the Return key.

NOTE

- The "ATL" function cannot be selected with this configuration.
- "Automatic Wheel Change Detection" is active.
  Also see: ContiPressureCheck Installation manual section "***Automatic Wheel Change Detection"*.**

6.5.3 Define axle-specific characteristics

6.5.3.1 Nominal pressure



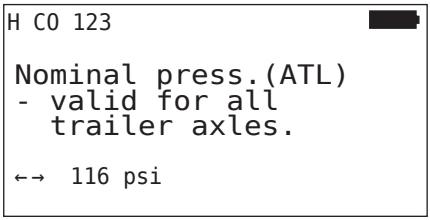
- Use the arrow keys ← → to navigate between the axles.
- Set the required nominal pressure with the arrow keys ↑↓.
- Confirm the set nominal pressures with the Return key ↵.

NOTE

- The nominal pressure can be set between 1.8 bar (26 psi) and 11.9 bar (173 psi).
- The warning thresholds are set automatically at 90% ("LOW PRESSURE“) and 80% ("VERY LOW PRESSURE“) of the nominal pressure.
- At a nominal pressure below 4.5 bar (65 psi) even small deviations in pressure can lead to a warning / alarm.
- When determining the nominal pressure, consider the instructions from the tire manufacturer.

6.5.3.2 Nominal pressure at ATL

This menu item only appears when the ATL function is previously selected.



- Set the required nominal pressure with the arrow keys ← →.
- Confirm the set nominal pressure with the Return key ↵.

NOTE

- Only one nominal pressure can be defined for all axles!
- The nominal pressure applies to all newly-connected trailers!
- The nominal pressure can be set between 1.8 bar (26 psi) and 11.9 bar (173 psi).
- The warning thresholds are set automatically at 90% ("LOW PRESSURE“) and 80% ("VERY LOW PRESSURE“) of the nominal pressure.
- At a nominal pressure below 4.5 bar (65 psi) even small deviations in pressure can lead to a warning / alarm.
- When determining the nominal pressure, consider the instructions from the tire manufacturer.

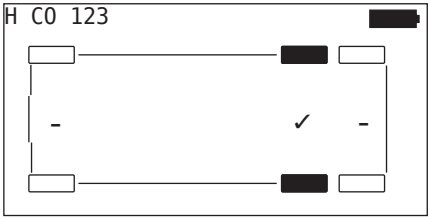
NOTE

The CPC system automatically detects when a single tire with tire sensor is replaced.
Also see: ContiPressureCheck -Installation manual- section "***Automatic Wheel Change Detection".***

- When selecting the ATL function, "Automatic Wheel Change Detection" is deactivated!

6.5.3.3 Lift axle

Depending on the vehicle type, an axle can also be defined as a lift axle.



- Use the arrow keys ← → to navigate between the axles.
- Change the status with the arrow keys ↑↓:
  „✓“ = lift axle
  „-“ = no lift axle
- Confirm selection with the Return key ↵.

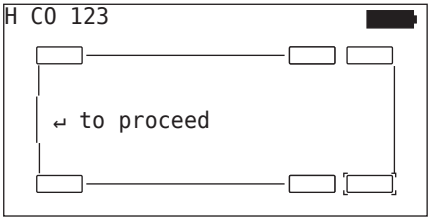
General conditions:

- If the selected configuration only has 2 axles (a truck or drawbar trailer) or only 1 axle (semitrailer), the page for determining the lift axle is not displayed.
- In the case of trucks or drawbar trailers, at least 2 ales may not be lift axles and in the case of the semitrailer only 1 axle.
- In the case of a truck or drawbar trailer, the 1st axle can not be set as lift axle.
- Altogether for each installation, a maximum of 2 axles from possible 6 can be set as lift axle (if the vehicle type is selected as "MARRIED", this is considered as **one** installation).

	NOTE
	▶ Lift axle setup must be made carefully. ▶ If the lift axles are wrongly determined, correct function of the CPC system cannot be ensured.

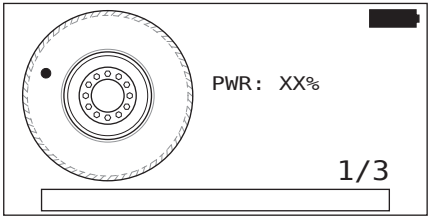
6.5.4 Fetching tire sensors

Now each individual sensor can be fetched. The current tire to be fetched is marked on the screen by "[ ]":



- Take the hand-held tool and go to the marked tire on the vehicle.
- Start the fetching process by pressing the Return key ↵.

An animation of the fetching process appears on the screen:



- Read the sensor with the hand-held tool as described in the section ***„6.2.2 Fetching a sensor fitted in the tire“ on page 32***.

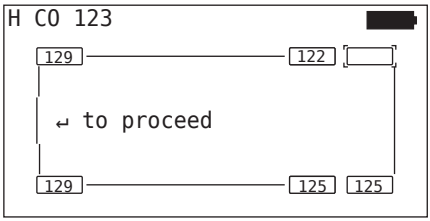
NOTE

- Pay attention to the starting point and the direction of rotation in the animation.

When the sensor in the marked tire is found, the tire symbol changes and the entry is displayed with the detected tire pressure.

The next tire to be fetched is displayed.

Fetch all tires as specified on the screen. The following message appears for the last tire to be fetched:



When the fetching process for all tires including the last is complete, the configuration is transmitted to the CPC system.

NOTE

- To fetch the tire sensor of the inner twin tires, the tool can remain on the outer of twin tires.

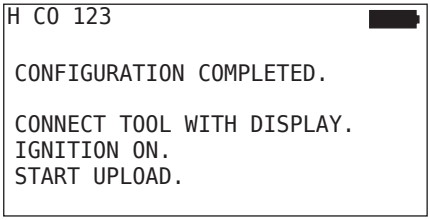
NOTE

- If the fetching process is aborted, the fetching process must be restarted from the beginning via the "Resume installation" menu item.
- All tires must be fetched again.
  See section ***„6.6 Resume initialization“ on page 73.***

6.5.5 Transfer of the configuration to the CPC system

In order for the data to be transferred to the CPC system, the hand-held tool must be connected to the CPC system via the diagnosis cable.

The following message appears on the screen of the hand-held tool:



NOTE

- To ensure safe transfer of the configuration, do not switch off the hand-held tool during data transfer or interrupt data transfer.

To transfer the configuration for a truck/bus, proceed as follows:

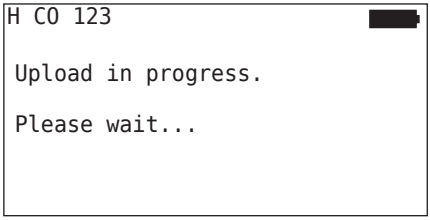
- Connect the hand-held tool to the plug socket of the display via the diagnosis cable.
- Switch on the ignition.
- Start transmission with the Return key.

To transfer the configuration for a trailer, proceed as follows:

- Release the plug connection between the pressure check indicator and the trailer wiring harness.
- Connect the hand-held tool to the wiring harness via the diagnosis cable.
- Switch on the ignition.
- Start transmission with the Return key.

	NOTE
	▶ If the trailer has no power supply during installation, the CCU of the trailer is supplied with current via the hand-held tool. This procedure is automatic.

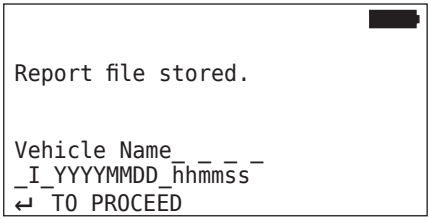
The following message appears during transfer:



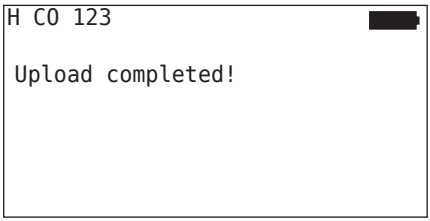
6.5.6 Log file

To complete transmission of the configuration data to the CPC system, a log file is created automatically and stored on the SD memory card. See also section *„7.4 Log files“ on page 122*.

The following is displayed on the screen:



After successful data transmission, the following appears:



NOTE

- The previously-set configuration is always stored on the hand-held tool. The advantage of this is that initialization of several vehicles with the same configuration is easier.

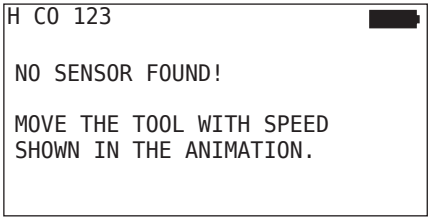
NOTE

- During every software update or every parameter modification on the CCU (“New Installation“, “Modify Parameters“, “Modify Sensor IDs“) all saved DTCs (error codes) are erased!
  See also section *„6.10 Diagnosis“ on page 98*

6.5.7 Possible problems

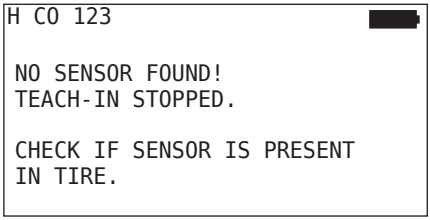
6.5.7.1 Sensor not found after 2 attempts

Sensor was not found after the first fetching attempt. The following message appears on the screen:



- Repeat the fetching process of the tire.

If the hand-held tool does not find the sensor after the second attempt, the fetching process is stopped and the following message appears:



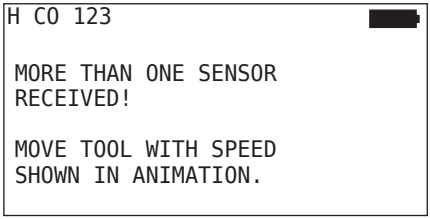
- Acknowledge the message with the Return key.

Remedy:

1. Check the charging state of the hand-held tool.
   - ▶ The charging state must be at least 40%.
   - ▶ If the charging state is sufficient, there is no sensor in the tire, the sensor is not operational or is defective.
2. Dismantle the tire for exact checking.
3. In the case of some tires and special vehicles, it is possible that the strength of the querying signal is not sufficient. Contact after-sales service for adjustment.
4. To initialize the CPC system, proceed as described in the section ***„6.6 Resume initialization“ on page 73***.

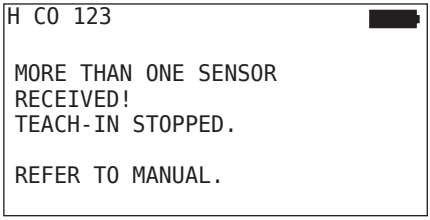
6.5.7.2 2 Different sensors found simultaneously

The following message appears on the screen:



- Repeat the fetching process of the tire.

If the hand-held tool finds 2 sensor again, the fetching process is stopped and the following message appears:



- Acknowledge the message with the Return key ⏎.

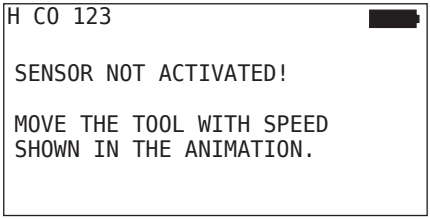
Remedy:

Check wether additional sensors are located within a range of 2 m of the tires.

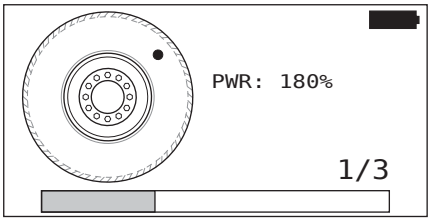
- ▶ If yes, remove the sensors from the communication range and repeat the fetching procedure.
- ▶ If no, move the vehicle approx. 1 m forwards or backwards and repeat the fetching procedure.

6.5.7.3 Sensors not activated

The following message appears on the screen:



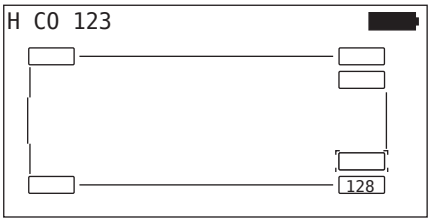
- Acknowledge the message with the Return key.



- Repeat the fetching process of the tire.

NOTE

▶ The sensor is automatically reset to park mode and fetched.



- Fetch the next sensor.

6.5.7.4 Further termination criteria during the fetching process

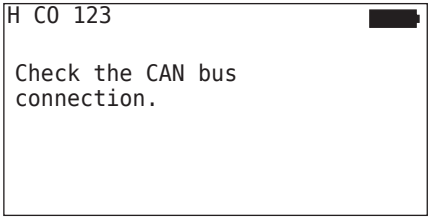
The following errors constitute termination criteria during the fetching process:

- Sensor is DEFECTIVE
- LOW battery
- Sensor is LOOSE

If a tire sensor has one of the errors stated, the tire must be dismantled and the sensor replaced.
If the tire sensor is not renewed, the fetching process cannot be completed.

6.5.7.5 Configuration transfer not possible

If there is no CAN bus connection, transmission of the configuration is not possible and the following message appears.



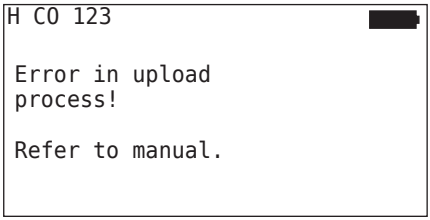
Remedy:

1. Check the connection between the hand-held tool, the diagnosis cable and the CPC components.
2. In the case of a truck installation, check that the ignition is switched on.
3. Repeat transfer of the configuration.
4. If there is still no CAN bus connection, exit the menu and check the cabling of the CPC system.

	NOTE
	▶ Further instructions on troubleshooting can be found on the homepage ***www.contipressurecheck.com***.

6.5.7.6 Transferred configuration not accepted

If configuration of the system is not successful, the following message appears:



Remedy:

In this case, communication to the CCU has failed.

- Repeat transfer of the configuration.

If the message appears again:

- Check the entire cabling and replace if necessary.

NOTE

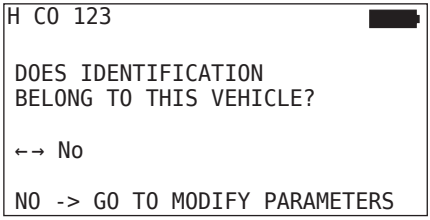
- Further instructions on troubleshooting can be found on the homepage ***www.contipressurecheck.com***.

6.6 Resume initialization

The **"Resume installation"** menu item is only active when the "New Installation" procedure was interrupted.

Installation - Resume installation

The following message appears on the screen:



6.6.7.1 Identification name belongs to vehicle

- Select "Yes" with the arrow keys ← → and confirm the vehicle name with the Return key ↵.

The initialization process is then continued from the point where "New Installation" was interrupted.

	NOTE
	▶ The fetching process of the tire sensors is an exception. If fetching is not fully completed, begin with the first tire again.

6.6.7.2 Identification name does not belong to vehicle

- Select "No" with the arrow keys ← → and confirm with the Return key ↵ to exit the menu item otherwise a wrong configuration is be installed for this vehicle.
- Carry out a new installation for this vehicle, see section ***„6.5 Initialization of the installed CPC system“ on page 54***.

6.7 Test drive

The "Test drive" menu item is used for checking the reception quality of the CPC system built into the vehicle.

For this purpose, the following data is acquired:

1. The number of telegrams from the individual sensors received.
2. The signal strength of the individual sensors acquired by the receiver.

The data received is evaluated by the hand-held tool and the result output in in 3 steps:

- Good reception
- Enough reception
- Just sufficient

NOTE

- ▶ In order to be able to check the reception quality of all installed tire sensors, all lift axles must be lowered.
- ▶ The sensors of raised lift axles are not taken into consideration during the test drive.
- ▶ When the ATL function is activated, the tires of the trailer are not taken into consideration during the test drive.

NOTE

- ▶ A route should be selected for the test drive that allows a speed of at least 30 km/h (18 mph).

NOTE

- ▶ The "Test drive" can by stopped at any time by pressing the ESC key (ESC) for 3 seconds.

The following applies to all test drives:

If the test drive is not completed with the "Good reception" result, the following remedial action is possible:

Variant	Remedial action
Only a CCU is used.	■ Optimize position and alignment of the CCU. ■ Retrofit an additional receiver
A CCU and an additional receiver are used	■ Optimize position and alignment of both components.
The "MARRIED" application is used.	■ If the reception of the tire sensors of the trailer cannot be improved by the previous remedies, the trailer must be retrofitted with its own CPC system.

NOTE

▶ Examples of suitable position and alignment of the CCU and additional receiver can be obtained from the homepage: ***www.contipressurecheck.com***

6.7.1 Test drive for truck/bus or MARRIED

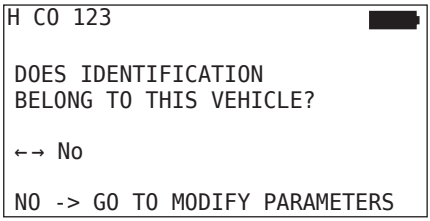
In order to enable the data to be transmitted from the CPC system to the hand-held tool, a connection must be established with the diagnostics cable.

- Connect the hand-held tool to the plug socket of the display via the diagnosis cable.
- Switch on the ignition.

	NOTE
	▶ If the vehicle is moved, it must stand still for at least 20 min. before the test drive can be started.

Installation - Test drive

The following message appears on the screen:



- Check the identification name of the vehicle

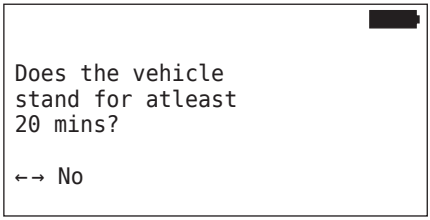
Identification name does not belong to vehicle

- Select "No" with the arrow keys ← → and confirm with the Return key ↵. The menu changes automatically to the "Modify Parameters" item in order to adjust the vehicle data, see section ***„6.2.1.1 Problem when reading - communication failed“ on page 31***.

Identification name belongs to vehicle

- Select "Yes" with the arrow keys ← → and confirm the vehicle name with the Return key.

The following query appears on the screen:

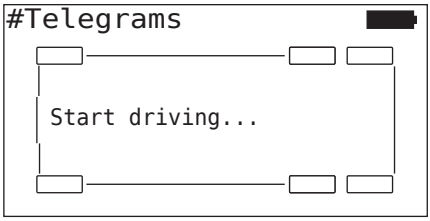


Standing time less than 20 minutes:

- Select "No" with the arrow keys ← → and confirm with the Return key to exit the menu.
- Wait for the required standing time and restart the "Test drive" menu.

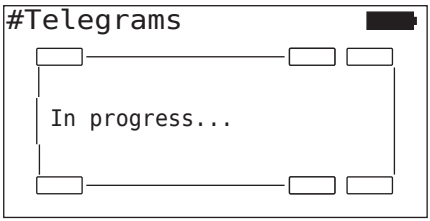
Standing time at least 20 minutes:

- Select "Yes" with the arrow keys ← → and confirm with the Return key.
- Read the disclaimer and confirm with the Return key

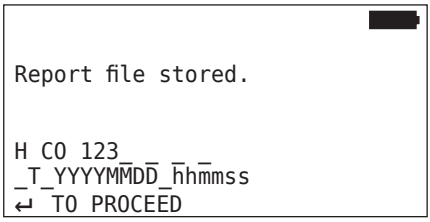


- Begin the test drive with the vehicle and continue until the end of the test drive is indicated by the corresponding instructions on the screen.

The following display appears on the screen during the test drive:



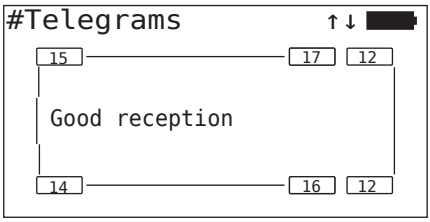
The test drive is completed and the hand-held tool creates a log file:

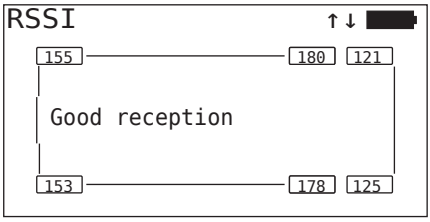


Following the message for creating the log file:

- Press the Return key ↵

For example, the following information appears:





Area	Meaning
Header	**Telegram**: the number of telegrams received per sensor in the tires is displayed. **RSSI**: the signal strength detected for the respective sensor in the tires is displayed.
Tire symbols	In the case of the **RSSI display,** the tire symbols change their appearance **according to the reception** quality. ■ Good reception - tire is "white" (see image) ■ Enough reception - tire is "black" (inverted) ■ Just sufficient - tire "flashes"
Middle row	The result of the test drive is displayed here. Good, enough or just sufficient reception is indicated. ■ **Good reception** No reception disturbance is expected. ■ **Enough reception** In rare cases, it is possible that reception for the tires displayed could be disturbed (radio disturbance; extreme weather conditions). ■ **Just sufficient** Frequent disturbances to reception for the tires displayed are possible.

NOTE

► Generally, the higher the RSSI value the better the reception.

NOTE

► If a lift axle was raised during the test drive, no figures are displayed in the tire symbols for the lift axles.

- Switch between the "Telegram" and "RSSI" display with the arrow keys ↕.
- In the case of the "MARRIED" vehicle type, it is possible to switch between truck and trailer with the arrow keys ← →.
- Confirm the result of the test drive with the Return key ↵.

If the test drive is completed with a "Good reception" result, remedial action is possible. See section ***„6.7 Test drive“ on page 74***.

	NOTE
	If an error occurs when the log file is stored: ▶ Make sure that the SD memory card is inserted in the tool. See section ***„5.3 Changing the memory card“ on page 25*** ▶ Check access to the SD memory card with "Diagnose/ Connection to the PC". See section ***„8.2 Connection to the PC“ on page 125***

6.7.2 Trailer test drive

In order to carry out a test drive for a CPC system installed in a trailer, the CCU of the trailer must be set to a "Test drive mode".

Contrary to the truck, the following must be done for the trailer for the test drive:

1. Activate the trailer system for the test drive (with the hand-held tool).
2. Carry out test drive (WITHOUT hand-held tool).
3. Evaluate the results of the test drive (with hand-held tool).

For steps 1 and 3, the following must be considered:

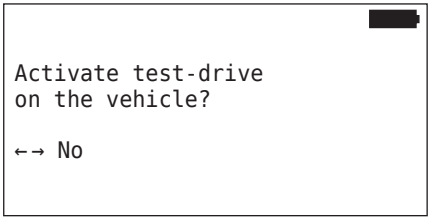
- Release the plug connection between the pressure check indicator and the trailer wiring harness.
- Connect the hand-held tool to the wiring harness via the diagnosis cable.
- Switch on the ignition.
  (if the vehicle power supply is not present, the hand-held tool supplies the CCU on the trailer.)

	NOTE
	▶ If the CSW software version is <10, a test drive for the trailer is not possible. ▶ Please update the CSW software accordingly. See section ***„6.10.2 Software updates“ on page 113***

Installation - Test drive

- Process the query for the identification number of the vehicle as in section ***„6.7.1 Test drive for truck/bus or MARRIED“ on page 76***.

The following query appears on the screen:



- Select "Yes" with the arrow keys ← → and confirm with the Return key ↵.

The hand-held tool confirms with a corresponding message that the trailer system is activated for the test drive

- Disconnect the hand-held tool and establish the plug connection to the pressure check indicator.
- Begin the test drive with the vehicle and continue until the pressure check indicator emits an optical signal (lights up continuously for 60 seconds).
- Connect the hand-held tool with the vehicle as described and restart the "Test drive" menu, evaluate the data.
  Evaluation takes place automatically and assessment takes place analogous to sect. ***„6.7.1 Test drive for truck/bus or MARRIED“ on page 76.***

	NOTE
	▶ If the vehicle is moved, it must stand still for at least 20 min. before the test drive can be started. ▶ As long as the qualifying criteria for the test drive are not reached, the pressure control indicator flashes with a special code (double flash every 2 seconds).

6.7.3 Possible error codes during test drives

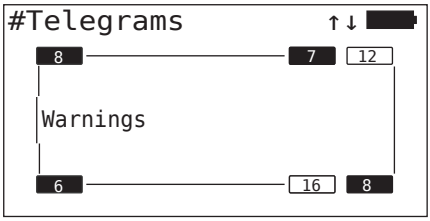
If an error occurs during the test drive, the test drive process is canceled. If not mentioned particularly, the error messages described in this section apply to the following variants: Truck/Bus, Trailer, MARRIED. After elimination of the error, the test drive must be started again from the beginning.

NOTE

- If the vehicle is moved, it must stand still for at least 20 min. before the test drive can be restarted.

6.7.3.1 Warnings

If a warning occurs during the test drive (such as LOW PRESSURE), the test drive is aborted and the following message is displayed on the screen:



A log file is created automatically and stored on the SD memory card.

In this case:

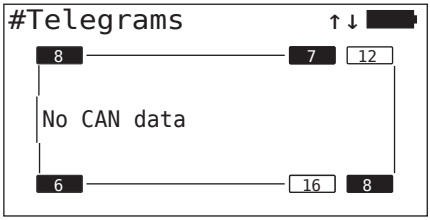
- Stop the test drive.
- Acknowledge the message with the Return key.
- Read the error codes via the menu described in section ***„6.10.1 DTCs (error codes)“ on page 98*** and remedy the error correspondingly.
- Allow the vehicle to stand still for at least **20 min.**
- Execute the "Test drive" menu again.

6.7.3.2 No CAN data

NOTE

▶ The error message can only occur during **"Truck/Bus test drive"**!

If CAN communication is interrupted during the test drive, the test drive is aborted and the following message is displayed on the screen:



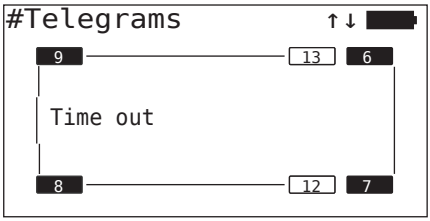
A log file is created automatically and stored on the SD memory card.

In this case:

- Stop the test drive.
- Acknowledge the message with the Return key.
- Error elimination according to the instructions in sect. ***„Transferred configuration not accepted“ on page 72***.
- Allow the vehicle to stand still for at least **20 min.**
- Execute the "Test drive" menu again.

6.7.3.3 Time-out

The tire sensor telegrams in STARTmode are used to evaluate the test drive (see sect. ***„6.4.1 Check sensor“ on page 38***). If an insufficient number of telegrams per wheel are received in “STARTmode” 20 minutes after the "Test drive" menu item was executed, the "Time out" message is displayed on the screen.



A log file is created automatically and stored on the SD memory card.

In this case:

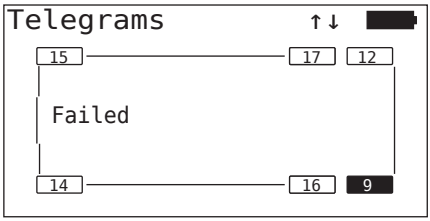
- Stop the test drive.
- Acknowledge the message with the Return key.

Possible causes:	Remedy
Vehicle moved too long at a speed of < 30 km/h (18 mph)	Move the vehicle faster during a new drive.

- Park the vehicle
- Allow the vehicle to stand still for at least **20 min**.
- Execute the "Test drive" menu again.

6.7.3.4 Failed

Only tire sensor telegrams in STARTmode are used to evaluate the test drive (see sect.*„6.4.1 Check sensor“ on page 38*). If a telegram for one wheel in DRIVEmode is received, before sufficient number of telegrams per wheel in “STARTmode” are received, the "Failed" message is displayed on the screen.



A log file is created automatically and stored on the SD memory card.

In this case:

- Stop the test drive.
- Acknowledge the message with the Return key.

	NOTE
	▶ If a lift axle was raised during the test drive, no figures are displayed in the tire symbols for the lift axles.

	NOTE
	▶ It is possible to switch between the "Telegram" and "RSSI" display with the arrow keys ↕ (see also section *„6.7.1 Test drive for truck/bus or MARRIED“ on page 76*.

Possible causes:	Remedy
Test drive with vehicle was started although the vehicle was moved previously for less than 20 minutes.	Allow the vehicle to stand still for at least **20 min.** before beginning the test drive.
The CCU and / or the additional receiver was unsuitably mounted or unsuitably aligned so that an insufficient number of telegrams form some wheel positions could be received in STARTmode. These wheel positions are displayed inverted in the "TELEGRAM" screen.	Check the position and alignment of the CCU and the additional receiver and change if necessary.

- Park the vehicle
- Check the error source according to the table and eliminate the error if necessary.
- Allow the vehicle to stand still for at least **20 min**.
- Execute the "Test drive" menu again.

6.7.3.5 Pressure check indicator

If the defined flashing code is not displayed after activating the pressure check indicator (short double flash every 2 seconds), do not start the test drive with the trailer.

Possible causes:	Remedy
Activation failed.	Repeat activation.
Pressure check indicator defective	Connect the hand-held tool to the components via the diagnosis cable. Switch on the hand-held tool. Check whether the pressure control indicator lights up.
No power supply to the CPC trailer system from the vehicle.	Establish power supply.

6.8 Modify Installation

	NOTE
	▶ By selecting the "Modification" item in the main menu, the charging state of the battery is checked. If this is not sufficient, the following message appears: "Low battery! Power on the HHT to charge it." Charge the hand-held tool as described in section ***„5.2 Charging the hand-held tool“ on page 24***.

6.8.1 Modify existing installation

Modification - Modify Installation

This menu item contains the following submenu items:

- Check Installation
- Modify Parameters
- Modify Sensor IDs

Requirements for using the submenu items:

- To communicate with the CCU, the hand-held tool must be connected to the CPC system.

	NOTE
	▶ If communication between the hand-held tool and the CCU is not possible, the process is aborted and a corresponding message is displayed. Remedy: » See section ***„6.10.2.4 Errors during a software update“ on page 119***

	NOTE
	▶ During every parameter modification on the CCU (“New Installation“, “Modify Parameters“, “Modify Sensor IDs“) all saved DTCs (error codes) are erased! See also section ***„6.10 Diagnosis“ on page 98***

6.8.1.1 Checking the installation

Modification - Modify Installation - Check Installation

The parameters of the existing installation are displayed under the **"Check Installation"** menu item. No changes can be made.

The following information can be called consecutively with the Return key ↵:

- Vehicle type
- Option: ATL
- State: Add. receiver
- Nominal pressures
- State: lift axles

Following the lift axle overview, the **"Modify Installation"** sub-menu appears.

6.8.1.2 Modify Parameters

Modification - Modify Installation - Modify Parameters

The following parameters can be changed in the **"Modify Parameters"** menu item:

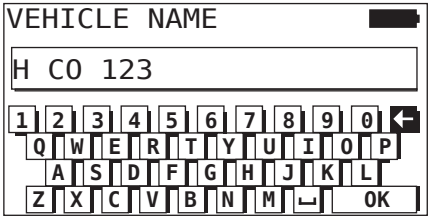
- Vehicle name
- ATL (can only be selected when axle number <5) Yes/No
- Add. Receiver Yes/No
- Lift axle Yes/No
- Nominal pressure

NOTE

The CPC system automatically detects when a single tire with tire sensor is replaced.
Also see: ContiPressureCheck -Installation manual- section "***Automatic Wheel Change Detection"*.**

► When selecting the ATL function, "Automatic Wheel Change Detection" is deactivated!

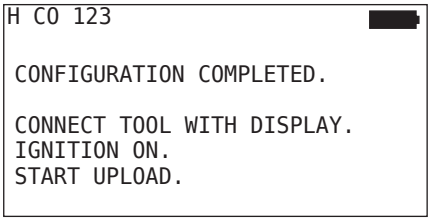
After selecting the menu item, the vehicle name is queried first.



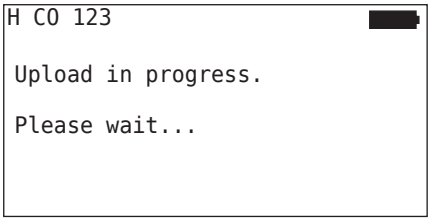
As described in section ***„6.5.1 Enter vehicle name“ on page 55***, it is possible to enter or modify the vehicle name via the virtual keyboard or confirm the existing name with the Return key.

After the parameters are modified, they can be transferred to the CCU.

The following messages appear:



- Start the upload with Return key.



If data transfer was not successful proceed as in sect. ***„6.5.7.5 Configuration transfer not possible“ on page 71*** or in sect. ***„6.5.7.6 Transferred configuration not accepted“ on page 72***. Otherwise the "**Modify Installation**" submenu appears.

A log file is created for parameter modification and stored on the SD memory card.

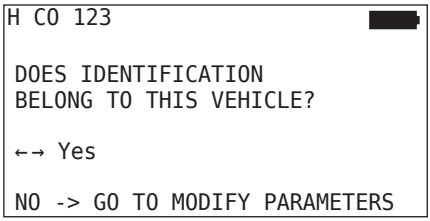
6.8.1.3 Modify Sensor IDs

Modification - Modify Installation - Modify Sensor IDs

It is possible to make changes in the **"Modify Sensor IDs"** menu item when the CPC system setup remains the same and only the assignment of sensor IDs is necessary (e. g., after several wheel changes or swapping the tire positions).

Before modifying the sensor IDs, the vehicle name must be confirmed.

For this purpose, the following query appears on the screen:



Identification name does not belong to vehicle

- Select "No" with the arrow keys ← → and confirm with the Return key ↵. The menu changes automatically to the "Modify Parameters" item in order to adjust the vehicle data, see section ***„6.8.1.2 Modify Parameters“ on page 93***.

Identification name belongs to vehicle

- Select "Yes" with the arrow keys ← → and confirm the vehicle name with the Return key ↵.

The configuration of the vehicle is loaded and after that, the hand-held tool is ready for the fetching process.

To fetch the tire sensors, remove the diagnosis cable from the hand-held tool and proceed as in section ***„6.5.4 Fetching tire sensors“ on page 62***.

When the tire sensors are successfully fetched, the hand-held tool must be connected to the CPC system via the diagnosis cable to transmit the new configuration to the CPC system.

A log file is created for every modification of the sensor IDs and stored on the SD memory card.

6.9 Deactivate/activate ContiPressureCheck system

6.9.1 Deactivate CPC

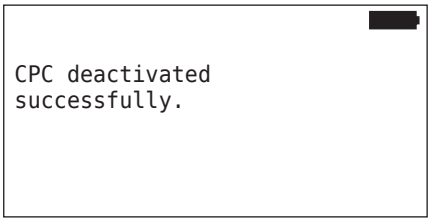
In the case that the CPC system exhibits a malfunction that could disturb the driver and cannot be quickly remedied, it is possible to temporarily deactivate the CPC system.

- ◆ Connect the hand-held tool to the CPC system via the diagnosis cable.

Modification - Deactivate CPC

The menu item deactivates the entire system.

The following message appears:



When the CPC system is successfully deactivated, the is indicated at system level as follows:

- Truck: display message "SYSTEM NOT ACTIVE"
- Trailer: pressure control indicator without function.
  Even in the case of "Ignition on", the display does not light up for 15 seconds.

NOTE

► If communication between the hand-held tool and the CCU is not possible, the process is aborted and a corresponding message is displayed. Remedy:

» See section ***„6.10.2.4 Errors during a software update“ on page 119***

6.9.2 Activate CPC

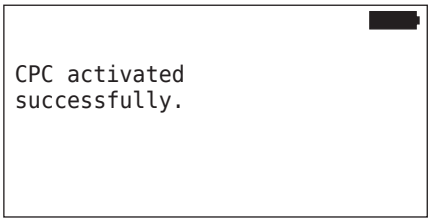
To activate the CPC system in the vehicle,

- Connect the hand-held tool to the CPC system via the diagnosis cable.

Modification - Activate CPC

This menu item activates the entire system in the vehicle.

The following message appears:



After successful activation, the CPC system is fully functional again.

NOTE

- If communication between the hand-held tool and the CCU is not possible, the process is aborted and a corresponding message is displayed. Remedy:
  - » See section ***„6.10.2.4 Errors during a software update“ on page 119***

6.10 Diagnosis

6.10.1 DTCs (error codes)

In the case of the following menu items, an query is transmitted to check whether the identification number of the vehicle is correct. Handle the query as in section ***„6.8.1.3 Modify Sensor IDs“ on page 95***.

NOTE

- Max. 20 active DTCs are stored for each system component.
- During every software update or every parameter modification on the CCU (“New Installation“, “Modify Parameters“, “Modify Sensor IDs“) all saved DTCs (error codes) are erased!

NOTE

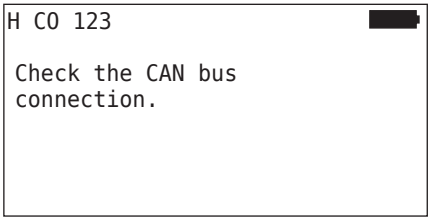
- By selecting the "DTCs (error codes)" item in the main menu, the charging state of the battery is checked. If this is not sufficient, the following message appears: "Low battery! Power on the HHT to charge it.“ Charge the hand-held tool as described in section ***„5.2 Charging the hand-held tool“ on page 24***.

Diagnosis - DTC (error code)

In the case of error messages, there is a difference between global and tire related error messages.

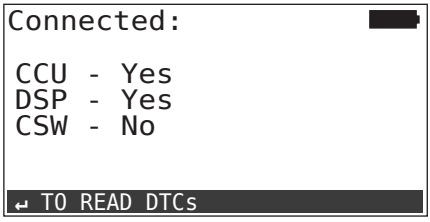
First of all, the connection to the CAN bus is checked.

If there is no connection, the message appears:

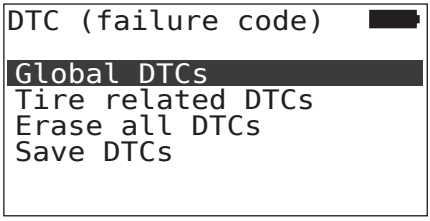


- Check CAN bus communication to the components (CCU, display and CAN switch).

If connected, the vehicle name is queried. A message subsequently appears with the status information of all components:



- Call the "DTC (error code)" submenu with the Return key ↵.



	NOTE
	If the "Error reading DTCs!" message appears during reading although the CCU, DSP or CSW components indicate a "Connected" status, then: ► Check whether the software for these components was correctly installed. See also section ***„Errors during a software update“ on page 119“.***

6.10.1.1 Read global error codes (DTCs)

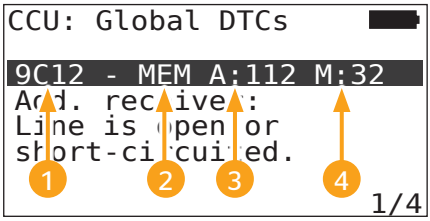
Diagnosis - DTC (error code) - Global DTCs

Global error codes can be read for the following components:

- CCU (control unit)
- CSW (switching module)
- DSP (display)

All errors are listed. All listed messages can be viewed with the arrow keys ↕.

	NOTE
	▶ The error codes (DTCs) are updated automatically every 30 seconds. ▶ If there are no global DTCs, the "No global DTCs found" message is displayed.



1. Error code
2. ACT: active error
   (error exists and must be eliminated.)
   MEM: passive error
   (error existed in the past and is no longer active.)
3. A: 112 (not counted for DTCs to DSP)
   - if M=0 (ACT): active for 112 ignition cycles
   - if M>0 (MEM): was active for 112 ignition cycles until remedied
4. M: 32 (not counted for DTCs to DSP)
   - passive for 32 ignition cycles

Note on eliminating error:

- Before a component is replaced, all DTCs must be stored and then erased.
- Switch off the CPC system and start again after one minute.
- Check DTCs again 2 minutes after restarting the CPC system.
- If the corresponding DTC occurs again, the components must be replaced.

NOTE

▶ If a component is replaced, the corresponding DTC must always be notified or the DTC log file transmitted.

The following error codes are possible:

For the **CCU**:

DTC	Description	Remedy
9C01	CAN communication error.	» Check plug-in connector on the display and the CCU. » Check cable. » Check CCU.
9C10	No communication with additional receiver.	» Check plug-in connector on the additional receiver and the CCU. » Check cable. » Check the additional receiver.
9C12	Add. receiver: Line is open or short-circuited.	» Check plug-in connector on the additional receiver and the CCU. » Check cable. » Check the additional receiver.
9A01	Supply voltage too low.	» Check whether on board voltage is at least 12 V.
9A02	Supply voltage too high.	» Check whether on board voltage is max. 28 V. » Replace CCU.
1F16	Data reception from tire sensors via RF is disturbed.	» Change location (indication of radio interference).
9B02	CCU defective.	» Replace CCU.
9B03	CCU defective.	» Replace CCU.

DTC	Description	Remedy
9F15	No Tire Sensors mounted or they are not activated.	» Use the hand-held tool to check whether tire sensors are really installed. For this purpose, carry out the fetching process according to sect. ***„6.4.5 Check all tires“***. or » Configure the CPC system according to sect. ***„6.5 Initialization of the installed CPC system“***.
9F13	CPC system not configured.	» Configure the CPC system according to sect. ***„6.5 Initialization of the installed CPC system“***.

For the d**isplay**:

DTC	Description	Remedy
9B04	Display defective.	» Replace display.

For the switching module (CSW):

DTC	Description	Remedy
9F02	CCU trailer defective.	» Replace CCU.
9F03	CAN communication error.	» Check plug-in connector on the CCU. » Check cable between CCU and pressure check indicator. » Check CCU.
9F04	External power supply too low.	» Check whether on board voltage is at least 12 V.
9F05	External power supply too high.	» Check whether on board voltage is max. 28 V.
9F06	Internal power supply too low.	» Check whether on board voltage is at least 12 V.
9F07	Internal power supply too high.	» Check whether on board voltage is max. 28 V. » Replace CCU.
9F08	Power supply for additional receiver too low.	» Check whether on board voltage is at least 12 V.
9F09	Power supply for additional receiver too high.	» Check whether on board voltage is max. 28 V. » Replace CCU.
9F0A	Short circuit at Pressure check indicator.	» Check cable between CCU and pressure check indicator. » Check whether the pressure check indicator is intact. (Connect the hand-held tool to the components via the diagnosis cable. Switch on the hand-held tool. Check whether the pressure check indicator lights up.)

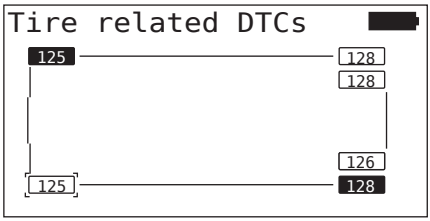
DTC	Description	Remedy
9F0B	Open circuit at Pressure check indicator.	» Check cable between CCU and pressure check indicator. » Check the pressure check indicator with the hand-held tool (see instructions on the DTC 9F0A) **If the diagnosis plug on the pressure** check **indicator remains open for 5 minutes without DTC query, this DTC (9F0B) is activated.**

6.10.1.2 Read tire-releated error codes (DTCs)

Errors for a certain tire can be read in the **"Tire-releated DTCs"** menu item.

Diagnosis - DTC (error code) - Tire-releated DTCs

The configuration appears on the screen as bird-eye-view. The tire positions with error message are marked in black: see also section ***„6.3 Screen displays“ on page 34***.



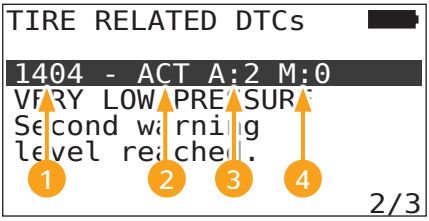
NOTE

- Flashing, black tire: there is at least one active error for this tire.
- Black tire: there is at least one passive error for this tire.
- The error codes (DTCs) are updated automatically every 30 seconds.
- In the case of a configuration with ATL, the DTCs of the trailer tires cannot be acquired by the hand-held tool.
- If there are no tire-releated DTCs, the "No tire related DTCs found." message is displayed.
  - » Change to the bird-eye-view with the Return key.
  - » Only the tire pressures are displayed.

- Select the desired tire with the arrow keys. The selected tire is indicated by "[ ]".
  (In the case of the "Married"“ configuration is possible to go to the axles of the trailer or the truck by pressing the arrow keys ⬅ ➡.)
- Press the Return key to display the error (only possible for black or flashing tires).

NOTE

- The numbers in the tire symbols indicate the current tire pressures in bar or psi.
- It can take up to 2 minutes until the pressures of all tires are displayed.
- If no pressure values are displayed after 2 minutes, the tire sensor is located at an unfavorable position and can not be received or it is defective.



1. Error code:
   14 - identifies the type of error
   04 - CPC-internal coding of the tire position
2. ACT: active error
   (error exists and must be eliminated.)
   MEM: passive error
   (error existed in the past and is no longer active.)
3. A: 2 - active for 2 ignition cycles
4. M: 0 - DTC is still active

The following error codes are possible:

DTC	Description	Remedy
90##	NO SIGNAL No reception of tire sensor data.	Poor reception » Check installed position and alignment of the CCU and/or additional receiver.
91##*	WHEEL JAMMED	» Check whether the wheel can be freely rotated.
92##	Tire sensor battery is low.	» Replace tire sensor.
13##	LOW PRESSURE First warning level reached.	» Increase tire pressure to recommended value.
14##	VERY LOW PRESSURE Second warning level reached.	» Check for damage. » If the tire is undamaged, increase the tire pressure to the recommended value.
15##	FAST PRESS. LOSS The tire is loosing pressure very fast.	» Check tire, valve and wheel rim for leaks.
16##	TEMPERATURE The tire sensor has detected a critical temperature.	Tire sensor was subject to too high temperature. » Check function of tire and brakes.
97##	SENSOR DEFECT The tire sensor is defective.	» Replace the tire sensor.

DTC	Description	Remedy
18##	The tire sensor is shut-down due to maximum temperature.	Tire sensor was subject to too high temperature. » Check function of tire and brakes.
19##	CHECK SENSOR The tire sensor is mount-ed in wrongly.	» Dismantle tire. Renew tire sensor.
1D##	CHECK SENSOR The tire sensor lost con-tact in tire.	» Dismantle tire. Renew tire sensor.

* This error message is optional and not available in all CPC versions.

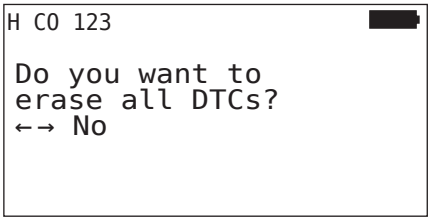
	NOTE
	▶ ## is a placeholder for the hex code that specifies the tire position. This position is dependent on the select-ed configuration.

6.10.1.3 Erase all error codes (DTCs)

The error messages of all components can be erased in the **"Erase all DTCs"** sub-menu.

Diagnosis - DTC (error code) - Erase all DTCs

The following message appears on the screen:



- Select "YES" with the arrow keys ← →.
- Press the Return key ↵ to erase the error codes of all components.

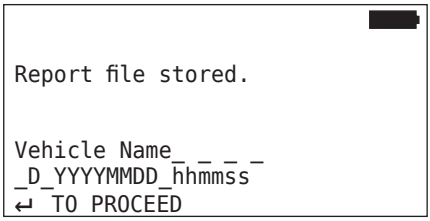
The "DTCs successfully erased“ message or "DTCs not completely erased" message appears. In the case of the latter, repeat the erase process.

6.10.1.4 Save error codes (DTCs)

Error messages can be saved using this menu item.

Diagnosis - DTC (error code) - Save DTCs

The following message appears on the screen:



A log file was created automatically and stored on the SD memory card.

NOTE

- If there are not DTCs, the "No DTCs found. Report not created." message is displayed.
- Saving DTCs is only possible when the SD memory card is inserted. See also section ***„7.4 Log files“ on page 122***“.

6.10.2 Software updates

Diagnosis - SW Update

	NOTE
	▶ The CSW (switching module) component is only available for a CPC with trailer. ▶ The DSP (Display) component is only available in the case of the CPC for Truck/Bus. ▶ The charging state of the rechargeable batteries is checked before the software update starts. If this is not sufficient, the following message appears: "Low battery! Power on the HHT to charge it." Charge the hand-held tool as described in section ***„5.2 Charging the hand-held tool" on page 24***. ▶ To ensure safe software updating, do not switch off either the hand-held tool during data transfer or interrupt data transfer. There is a risk that the components to be updated (CCU, DSP, CSW) could be damaged permanently.

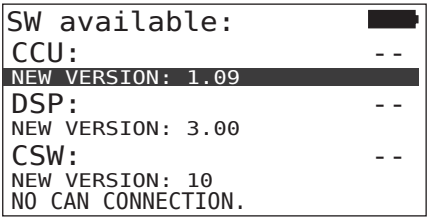
A software update is possible for the following components:

- CCU (control unit)
- CSW (switching module)
- DSP (display)

6.10.2.1 Available software on the hand-held tool

To control the current component software on the hand-held tool, it is possible to call the menu item in offline mode (without connection to the CPC system).

Only the versions for the individual components stored on the hand-held tool are then displayed.

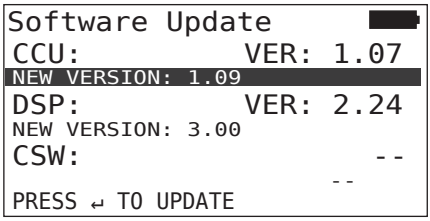


6.10.2.2 Truck/bus:

To update the software for a truck/bus, proceed as follows:

- Connect the hand-held tool to the plug socket of the display via the diagnosis cable.
- Switch on the ignition.

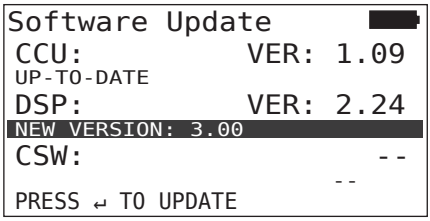
If a new software version is available on the hand-held tool, the following message is displayed:



NOTE

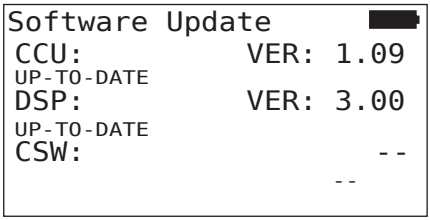
▶ During updating of the CCU software, it is possible that "SYSTEM ERROR" appears in the display.
This is not displayed after successful updating of the CCU.

- Start the software transmission for the CCU with the Return key.



- Start software transmission for the display with the Return key.

If the software for the components was updated successfully, the following message appears:



NOTE

- No software versions are displayed for the CSW because the CCU for Truck/Bus does contain a CSW.
- If the "HHT IS NOT UP TO DATE" message is displayed, update the software of the hand-held tool. See section ***„8.1 Software update for the hand-held tool“ on page 124***
- If updating the CCU fails, the stored vehicle configuration is lost. After updating the CCU successfully, the vehicle configuration must be renewed. See section ***„6.5 Initialization of the installed CPC system“ on page 54***

NOTE

- Pressing the ESC key (***ESC***) returns to the diagnosis menu from every software update page.

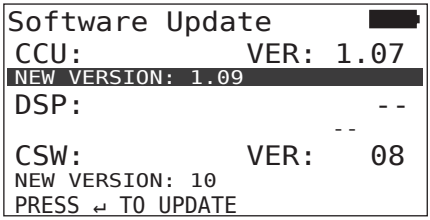
6.10.2.3 Trailer

To update the software for a trailer, proceed as follows:

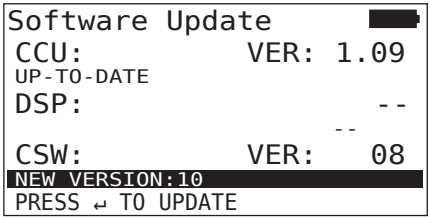
- Release the plug connection between the pressure check indicator and the trailer wiring harness.
- Connect the hand-held tool to the wiring harness of the trailer via the diagnosis cable.
- Switch on the ignition.

	NOTE
	▶ If the trailer has no power supply during installation, the CCU of the trailer is supplied with current via the hand-held tool. This procedure is automatic.

If a new software version is available on the hand-held tool, the following message is displayed:

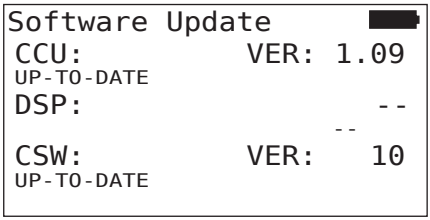


- Start the software transmission for the CCU with the Return key ↵.



- Start software transmission for the CSW (switching module) with the Return key ↵.

If the software for the components was updated successfully, the following message appears:



NOTE

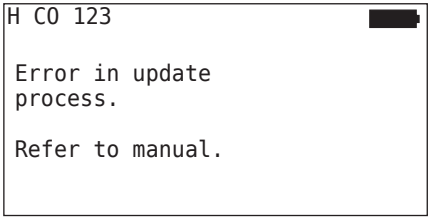
- No software versions are displayed for the DSP because the trailer configuration has no display.
- If the "HHT IS NOT UP TO DATE" message is displayed, update the software of the hand-held tool. See section ***„8.1 Software update for the hand-held tool“ on page 124***.
- If updating the CCU fails, the stored vehicle configuration is lost. After updating the CCU successfully, the vehicle configuration must be renewed. See section ***„6.5 Initialization of the installed CPC system“ on page 54***.

NOTE

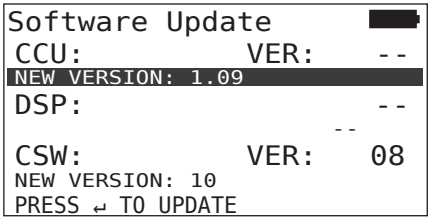
- Pressing the ESC key (***ESC***) returns to the diagnosis menu from every software update page.

6.10.2.4 Errors during a software update

If the SW update fails, a corresponding warning is displayed.



The current version number can not be read and is displayed as follows.



In this case:

- Repeat the software update.

If the error occurs again:

- Replace components.

7 SD memory card

7.1 General instructions on the SD memory card

	NOTE
	▶ Without SD memory card, the hand-held tool only has the "English menu language"! ▶ It is not possible to set the language without a SD memory card! ▶ Storing of DTCs and log files is not possible without a SD memory card.

7.2 Handling data on the SD memory card

Access to the SD memory card takes place via a USB connection to the PC, see section ***„8.2 Connection to the PC“ on page 125***.

- The directory structure and names may not be changed.
- The contents of all files as well as their names may not be changed.
- Do not erase any files on the memory card!
  The "Log Files" in the "REPORT" directory are an exception and may be copied and erased.

ATTENTION

Failure of the system due to incorrect handling of files on the SD memory card!

Not following the procedure for “Handling data on the SD memory card” can:

– lead to total failure of the hand-held tool.

– lead to incorrect functionality or total failure of the CPC system.

– make log files for further processing unusable.

▶ Follow the instructions on "Handling data on the SD memory card" to avoid damage to property.

7.3 Directory structure

- SD MEMORY CARD
  - CONFIG
  - LANGUAGE
  - REPORT
  - TEMP
  - UPDATE

7.4 Log files

The log files that are created when working with the hand-held tool are stored in the "REPORT" directory on the SD memory card, see section ***„7.3 Directory structure“***.

To identify the individual log files, unique names are automatically assigned. These consist of the following data:

- Vehicle name
- Code letter for the menu function executed
  T = Test drive
  D = DTC
  I = Installation
  V = "Check all tires"
- Consecutive counter or date and time

NOTE

▶ The use of date and time can be activated under **Setup - Tool Properties - Use Date**.

In this case:

– the file name, date and time are used instead of the consecutive counter.

– the date and time are stored in the log files.

The log files can be transmitted to the PC (see sect. ***„8.2 Connection to the PC“ on page 125***) and erased if required.

NOTE

- Storing of DTCs and log files is not possible without an SD memory card! An error message appears.
  Remedy:
  - » Make sure that the SD memory card is inserted in the tool. See section ***„5.3 Changing the memory card“ on page 25***
  - » Check access to the SD memory card with "Diagnose/Connection to the PC". See section ***„8.2 Connection to the PC“ on page 125***

NOTE

- A software program is offered for evaluating the log files (see ***www.contipressurecheck.com***).

8 Maintenance

8.1 Software update for the hand-held tool

To update the software of the hand-held tool, follow the instructions on the homepage:

www.contipressurecheck.com

NOTE

- The menu begins with the main setting in English. Select the desired language by following the menu path: **"SETUP/LANGUAGE"**.
- If no SD memory card is inserted in the hand-held tool or it is no longer responding, only "**ENGLISH**" is available.

NOTE

- Check the website regularly for software updates.

8.2 Connection to the PC

The menu item allows communication between the SD memory card and a PC/Laptop in order to:

- transmit the log files to the PC/Laptop.

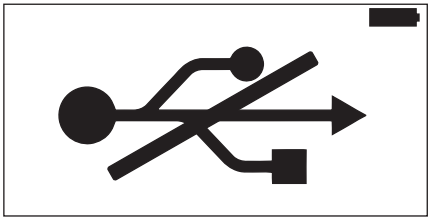
Diagnosis - Connection to PC

For communication (data transfer) with the SD card, the SD card can remain in the hand-held tool. Communication with the PC/laptop takes place via the USB cable.

To establish communication, proceed as follows:

- Select the **"Diagnosis/Connection to PC"** menu item and press Return key ↵ to confirm.

The following appears:



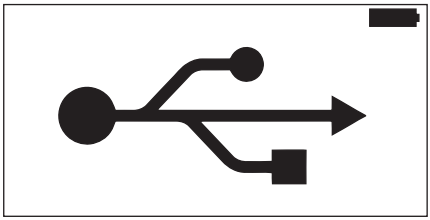
NOTE

If the SD memory card is missing or does not respond, language setting is not possible.

▶ Follow the menu path **"Diagnosis/Connection to PC"** to connect the hand-held tool to the PC.

◆ Connect the hand-held tool to the PC/laptop via the USB cable.

The following appears:



NOTE

▶ This procedure can take a little longer the first time until the hand-held tool is recognized.

▶ The connection procedure can take place in reverse order:
Connect the USB cable first and then run "Diagnosis/ Connection to PC".

◆ The log files in the REPORT directory can be copied or moved to the PC/Laptop.

◆ After completing data transfer, log the hand-held tool out of Windows and remove the USB cable.

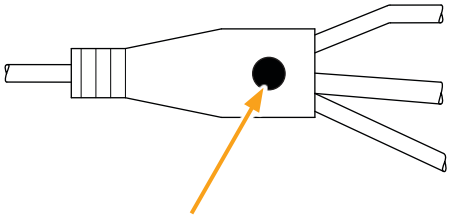
8.3 Replacing the fuse in the diagnosis cable

If communication with the pressure check indicator or the power supply of the CCU of the trailer system via the diagnosis cable is not possible, the fuse in the diagnosis cable must be replaced.

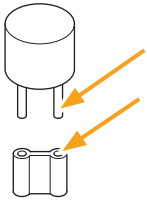
	NOTE
	▶ Only use original 315 mA series 373 TR5 fuses from Wickmann. ▶ Two replacement fuses are provided for the hand-held tool.

To replace the fuse in the diagnosis cable, proceed as follows:

◆ Remove the old fuse (see arrow).



◆ Carefully insert the new fuse, pay attention to the position of the pins.



8.4 Cleaning

If dirty, clean the housing of the hand-held tool with a slightly damp, lint-free cloth. Do not use cleaners containing solvents.

8.5 Storage

The following regulations apply for storage:

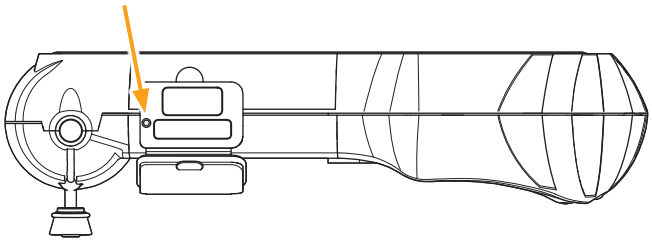
- Store in a dry place. Maximum relative humidity: 80%, non-condensing
- Protect against direct sunlight. Keep storage temperature between -40 ... +85 °C/-40...185 °F.

	NOTE
	► After using, store the hand-held tool in the transport case supplied.

9 Troubleshooting

9.1 Resetting

If the hand-held tool should not longer react despite charged batteries, it must be reset. To reset the hand-held tool, press in the reset key next to the connecting sockets with a ball-point pen tip or the tip of straightened paper clip.



10 Disposal

10.1 Electrical/electronic components

This tool may not be disposed of in the domestic refuse.

The hand-held tool contains a lithium battery that is cast into the housing and cannot be replaced. After reaching the end of its service life, the tool must be disposed of in accordance with all current local, regional and national laws and regulations. The tool can be taken to collection points for electrical/electronic component or the CPC sales partner. It can also be sent back to the following CPC collection point.

Address of the central CPC collection point:

Continental Trading GmbH

"Abteilung Entsorgung"

VDO-Straße 1,

Gebäude B14,

64832 Babenhausen

Germany

11 EC Declaration of Conformity

The full original Declaration of Conformity can be found on the CD under “CE-Certificate_HHT_Vxx.pdf“ (xx = placeholder for the current version no.) or under www.contipressurecheck.com.

12 Homologation

12.1 Overview

An overview of the existing homologations can be obtained from the corresponding supplementary sheet (Homologation/Certificate Hand-held-Tool Art.No. 17340490000). In addition, it can be found on the CD under “Overview_HHT_Homologation_VXX.pdf“ (xx = placeholder for the current version no.) or under www.contipressurecheck.com.

12.2 Canada

- Canada, Industry Canada (IC) Notices
  “This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:
  (1) this device may not cause interference,
  and
  (2) this device must accept any interference, including interference that may cause undesired operation of the device.“

- Canada, avis d‘Industry Canada (IC)
  “Le présent appareil est conforme aux CNR d‘Industrie Canada applicables aux appareils radio exempts de licence.
  L‘exploitation est autorisée aux deux conditions suivantes :
  (1) l‘appareil ne doit pas produire de brouillage,
  et
  (2) l‘utilisateur de l‘appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d‘en compromettre le fonctionnement.“

This Class B digital apparatus complies with Canadian ICES-003 plus the RES-GEN, 003 (2010-12) and RSS210, issue 8 (2010-12).

13 Index

A

Abbreviations 8
After-sales service 10
  Eliminating errors 10
  Repairs 10
  Updates 10

C

Charging state 24
Cleaning 128
Commissioning 23
  Charge tool 24
  Set up tool 28
  Switch tool ON/OFF 27
Connections 18
Connection to the PC 125

D

Declaration of Conformity 129
Description of functions 15
Disposal 129

H

Homologation 130

I

Intended use 13

L

Liability disclaimer 7
Log files 122

M

Manufacturer's address 9
Menu control 21
Menus
  Diagnosis
    DTCs 98
    Software updates 113
  Installation
    Continue installation 73
    New Installation 54
  Modification
    Check Installation 92
    Modify Parameters 93
    Modify Sensor IDs 95
  Tire sensor 37
    Activate Sensor 40
    Check Sensor 38
    Clear LOOSE state 42
    Deactivate Sensor 41
Menu structure 19
Modify Installation 90

O

Operating
  Fetch sensor 32
  Handling the tool 30
  Read sensor 31
Operating elements 16

R

Replacing the fuse in the diagnosis cable....127
Reset....128

S

Safety....11
Scope of supply....23
SD memory card
  Change card....25
  Slot....18
Software Update for the hand-held tool....124
Storage....128
Symbols....8

T

Technical data....14
Type plate....22

W

Warnings....9
Warranty....10

Continental Reifen Deutschland GmbH
Büttnerstraße25
30165 Hanover
Germany

www.contipressurecheck.com
www.continental-truck-tires.com
www.continental-corporation.com

Continental
The Future in Motion

BH_HHT_0214_A1_EN